PUBLIC HEALTH MONOGRAPHS

edited and issued by Public Health Reports

U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

OVETA CULP HOBBY, *Secretary*

PUBLIC HEALTH SERVICE

LEONARD A. SCHEELE, *Surgeon General*

Records and Reports Of Local Health Departments

Criteria and Methods
For Organization, Maintenance
And Use

By Olive G. Johnson

Public Health Monograph No. 15

The Author

Miss Johnson, formerly a public health analyst in the Division of Public Health Methods, Public Health Service, is chief medical record librarian in the Clinical Center, National Institutes of Health. Between 1946 and 1951, she conducted surveys and demonstration projects in the organization of record and report systems in local health departments. This monograph is a summation of her findings and recommendations.

Public Health Service Publication No. 285

(Issued concurrently with the issue of Public Health Reports, vol. 68, No. 11)

Library of Congress Catalog Card No. 53-63301

Received for publication January 1953

UNITED STATES GOVERNMENT PRINTING OFFICE, WASHINGTON, D. C., 1953

For sale by the Superintendent of Documents, U. S. Government Printing Office

Washington 25, D. C. Price 45 cents

Foreword

The importance of records and reports in the operation and evaluation of services and in the appraisal of efficiency of administration is increasingly recognized. The Division of Public Health Methods and the Division of State Grants have therefore jointly sponsored a series of surveys and demonstrations of record and report systems in local health departments. These joint projects were undertaken in 25 localities in 8 States at the request of their State and local health departments.

This monograph presents the results of these studies and demonstrations and outlines suggested procedures for the organization and maintenance of effective record and report systems. It is made available in the belief that many local agencies will find this publication a valuable guide in organizing or in revising their procedures for collecting and analyzing data regarding their services.

Centralized responsibility for organization and administration of records and reports has many advantages. It promotes uniformity of content, comparability of data, consistency of procedures, and accessibility of information to all divisions. Centralized control can be achieved even in health departments that find it necessary to have some records physically located in separate divisions or health centers. The examples given in the text and appendixes illustrate both centralized and decentralized location of records in both small and large health departments.

AARON W. CHRISTENSEN, M.D.,
Chief, Division of State Grants.
G. ST.J. PERROTT,
Chief, Division of Public Health Methods.

JANUARY 1953.

Acknowledgment

Acknowledgment for help in this study is made to Dr. Antonio Ciocc head of the department of biostatistics, Graduate School of Public Healt University of Pittsburgh; to Dr. Roscoe P. Kandle, field director, America Public Health Association; to the staffs of the Bureau of State Services, Publ Health Service, and of the Commonwealth Fund; and to George St.J. Perrot Clark Tibbitts, and Martha D. Ring, of the Division of Public Health Method Virginia Lee and Patricia Jeffrey, formerly with the Division of Public Healt Methods, through their encouragement, criticisms, and assistance, also aide in the preparation of this monograph.

Contents

Contents—Continued

List of Illustrations

Chapter I

Introduction

1. The functions and activities of local health departments have greatly broadened in the past two decades. A generation ago acute communicable diseases and basic sanitation constituted the major fields of public health concern. Today, increasing emphasis is being placed on long-term diseases, such as cancer, tuberculosis, and heart disease, and on the influence of socioeconomic factors in the prevention and control of illness. Programs for prevention and early detection of chronic illness have focused the attention of public health personnel on the individual and his family and their economic setting.

2. These changes in functions of local health departments are reflected in the responsibilities of the professional staff. Formerly, the public health nurse, for example, was concerned mainly with some specific phase of the health program, such as communicable disease control. With concentration on the family as a unit the responsibilities of the nurse have become broader and more generalized. This generalization in the administration of nursing service has enabled the nurse to coordinate services to the individual and the family and to effect continuity of supervision. She calls on consultants to advise on special phases of the work indicated for each program.

3. The emphasis on the individual and the family, the concentration on control programs for long-term diseases, and specialization in professional fields have intensified the demand for records and reports that will aid the health department staff in giving and evaluating the services for which the department is responsible. Records and reports must therefore be designed to permit qualitative and quantitative analysis of the health services to individuals, families, and the community and to facilitate periodic appraisal of each of the health department's programs.

4. Existing reference material on local health department records is mainly concerned with administrative records. Mountin and Flook (*18*, *19*) recommend several administrative uses of the patients' index cards and also suggest combinations of administrative reports. Bellows and Ramsey (*6*) present methods of integrating health department records. "The Recording of Local Health Work" (*26*) and "Rural Health Practice" (*21*) are among the few available sources that discuss basic records and recordkeeping procedures. Other approaches to current problems of health department record systems emphasize the unnecessary duplication of data and the nonessential detail recorded on the forms.

5. In local health departments, medical and nursing records are maintained for persons served by the programs for control of acute communicable diseases, tuberculosis, venereal disease, maternal and child health, and school health. Additional records are installed when programs for cancer, other chronic illness, and medical care of the indigent are started. Sanitation records are maintained for premises inspected by the health department.

6. Many departments that have recently studied their record and report systems have found it necessary to develop simpler, more effective, and more adaptable procedures. The findings and recommendations presented in this publication are based on such studies in surveys of systems used in 25 local health departments in 8 States and on demonstration projects in a city and a city-county health organization which were conducted at the request of the State and local health departments concerned.

7. Fiscal and personnel records are omitted from this study since their forms and procedures must conform to requirements set by State and local agencies. Some of the admin-

istrative uses of vital records (birth and death certificates) are presented; others are discussed by Massey (*15*), Mustard (*20*, *21*), Puffer (*22*), and Rosenau (*24*). Methods of processing these records in local areas are governed by the statutes and regulations of individual States. No attempt has been made to suggest specific forms for recording data on service records since the content of such forms necessarily varies with the objectives and needs of each health department.

8. The chapters that follow present criteria for analyzing the effectiveness of existing or proposed systems of records and reports, principles to be followed in organizing the systems, and explanations of the mechanics of record-keeping. The principles and methods presented are not dependent on the size of the organizations; they are equally applicable to both small and large health departments. Appendix A includes six examples which illustrate the greater accessibility, uniformity, and usefulness of local health department records achieved through reorganization.

Chapter II

Criteria for Analysis of Records and Reports

9. Records and reports are of value only when they meet the specific needs of the staff—administrative, medical, nursing, or sanitation. These needs are determined by the objectives of the health department. Since no two communities have the same requirements and no two local health departments have the same facilities, a study of records and reports requires a detailed analysis of existing health programs and of the plans for those to be established in the immediate future.

10. This chapter considers the content and purpose of records and reports and, in addition, outlines the steps recommended to local health departments for analyzing their need for records and reports, selecting specific data to be recorded, determining the procedures to be developed, and reviewing existing systems. Subsequent chapters describe methods and procedures for the organization of records and reports in local health departments.

11. Records and statistical reports are distinct entities and, for the purpose of this monograph, are defined as follows:

12. *Records:* Written statements noting facts and events pertaining to an individual or establishment. Records aid in promoting continuity of service and provide source material for periodic and special analytical reports.

13. *Reports:* Accounts, statistical summaries, or statements of relationships of pertinent material obtained from records as defined above.

14. Medical and nursing records in local health departments contain entries of the findings, observations, services given, and recommendations made to individuals and to members of their families. Sanitation records contain entries of the findings, recommendations, and action of the health department regarding premises and establishments. These records are used for the following purposes:

15. *Medical staff:* To refer to the past history of the individual, to provide a source of data for special epidemiological and other research studies, and to furnish materials for resident training and staff education.

16. *Nursing staff:* To provide a tool for adequate nursing service to the individual and his family and for correlation of nursing services with the services given by other members of the health department staff, to furnish a means of integrating health department services with those of other agencies in the community, and to provide material which will aid in the inservice training and supervision of the staff.

17. *Sanitation staff:* To provide source material for analyzing program operations, special problems, and personnel activities, and to furnish data for staff education.

18. *Administrative staff:* To provide a source of information that is necessary for administrative coordination and control of each program, for evaluation of services furnished, for evidence in legal action, and for information to be used in answering authorized requests from other agencies.

19. Reports measure the services given by the local health department. These reports are needed to evaluate the general and specific programs of each division of the department in relation to the needs of the community, to determine the problems arising in each program, to direct the programs toward future needs, to analyze services in relation to administrative procedures and costs, to evaluate the achievements of department personnel and the efficiency of each division, to compare activities of the department with the work of similar agencies, and to provide material for public information and health education. Individual and family records form the basis of reports.

20. When properly organized and maintained, records and reports are valuable tools for effective administration of public health

services. The importance of adequate records is stressed in the supplementary report of the Council on Medical Education and Hospitals submitted to the House of Delegates of the American Medical Association for approval at the San Francisco meeting. Included in that report (see J. A. M. A. 143: 1001, July 15, 1950) is the following statement regarding qualifications of a health department for resident training in preventive medicine and public health, which reads: "An efficient system of records must be maintained. Since much of the resident's later responsibility is likely to be administrative in nature, it is essential that he has a thorough indoctrination in the preparation and maintenance of reports, registers and other required records."

Outlining Objectives

21. An outline of the broad objectives of the health department, of the general and specific objectives for each program, and of the methods of accomplishing the objectives is the first step in the organization of records and reports. This outline is basic; it provides the key to the development of records and reports that is valuable for effective administration of health services.

Conference Method

22. The conference method (*1*), in which the objectives of the organization and of each program are defined and the methods of accomplishing the objectives are discussed by the policy-making staff of the organization, achieves the most profitable results. Group thinking and cross-fertilization of ideas are more effective in stimulating analysis and decision than is the product of any one individual or group whose main interests lie in one area of a program. An outline that is broad and comprehensive, with consideration given to every phase of the activities, affords the most productive foundation for the record and report systems. In the small health department this group may consist of the health director, the chief nurse, and the sanitarian; in larger departments it may be the health director and his division directors. In addition, it is advantageous to have the statistician and the supervisor of records participate in these conferences. The smaller departments that have no statistician can frequently call on the statistician of the State health department or of some community agency for consultation. In small health departments the secretary to the health director may be the supervisor of records and reports. In any case, the group should include those familiar with the problems and policies of program organization and operation as well as those concerned with planning and supervising record and report systems.

Sample Outline

23. The following example indicates an outline of objectives and methods of accomplishing them for a child health conference, one phase of the infant and preschool program. Objectives and methods for other programs are presented in chapter VIII.

General objective:
- To improve the health status of infants and preschool children.

Specific objectives:
- Prevention of communicable disease.
- Promotion of normal physical, mental, and emotional development.
- Development of health education service.

Methods of accomplishing objectives:
- Holding child health conferences in areas of city where the population has greatest need of the services.
- Providing medical staff to give the preventive services offered by the health department—periodic physical examinations, immunizations, health advice, and instruction.
- Providing nursing staff to give health guidance service to the parents of the children attending the conference and to other members of the family at the conference and during followup home visits.
- Providing necessary medical and nursing consultants in specialized fields.
- Detecting physical defects and illness in their earliest stages and referring promptly for correction.
- Analyzing and evaluating services given to determine the degree to which the objectives have been accomplished.

Need for Records and Reports

24. The need for records of services given is indicated in the outline above under "Methods of accomplishing objectives." For example, "periodic physical examinations, immunizations, health advice, and instruction" point to the need for records of the examination findings as well as of the laboratory and X-ray

studies that are frequently included in the physical examination. Records of first examinations, together with data on any followup visits or other health department service, should be available so that the physician may have knowledge of the findings of all previous examinations, the home situation, and any visits of the individual with other members of the staff of the health organization. The physician refers to these findings when he reviews the record to interpret the results of the examination to the parents and, when indicated, to the specialist to whom the child may be referred. The understanding of each situation is clearer when data are available for every home, clinic, and conference visit. Again, "health guidance to parents of children attending the conference and to other members of the family at the conference and during followup home visits" highlights the need for recording observations and recommendations and referring to previous records of services given by members of the professional staff.

25. Birth certificates have a specific function in aiding the accomplishment of the objectives. For example, "holding child health conferences in areas of the city where the population has greatest need of the services . . .; detecting physical defects and illness in their earliest stages and referring promptly for correction . . ." indicate uses which may be made of these vital records. In many health departments the birth certificate is used as the notification to the public health nurse of the births in the community. Visits are made to these homes and guidance in health problems is offered to the parents. Departments that do not make visits to the homes of all newborn infants frequently select for visiting those homes which are in areas where the socioeconomic factors indicate the need. Almost all departments utilize the information regarding prematurity, congenital defects, and birth injuries reported on the certificate. Home visits are made to parents to offer health guidance and to suggest prompt referral of the child for correction of the reported defect. In addition, the addresses of the parents of newborn infants recorded on the certificates may be used in determining the geographic area in which child health conferences would be most convenient and beneficial for the families using the service (*7, 8*).

26. The need for reports is revealed in the sample outline (par. 23) by the method stated as "analyzing and evaluating services given to determine the degree to which the objectives have been accomplished."

Selecting Specific Information

Method of Selecting Data

27. The selection of data includes, in addition to choosing the items to be recorded, the evaluation of each item as to its use in accomplishing the objectives, determining the period for recording the data and the frequency of compilations.

28. *Choosing the items.* While the objectives are being outlined, members of the administrative staff also select specific items which are considered essential for giving service and for the evaluation of each program. The conference method (*1*) of outlining objectives is recommended because the benefits achieved through group thinking are advantageous in determining each item to be recorded. The American Public Health Association Evaluation Schedule (*2*) is a useful guide for the selection of pertinent topics. Each health department, however, has to determine the essential items which will aid in giving service and in evaluating the service given as well as the methods of analysis to be used. The recent criteria for public health studies developed in the Pittsburgh Conference on Methods in Public Health Research (*16*) offer guides that are applicable to many types of statistical analysis.

29. *Evaluating the importance of each item.* The following questions (*26*) aid the administrative staff in determining the importance of each specific item to be recorded:

> Is it important that this information be obtained?
> Can it be obtained with reasonable facility and accuracy?
> Will it be used if recorded?
> Will its use contribute to the care of the case and the protection of the community; the administration of services; the evaluation of results?

30. *Determining current and periodic needs for data.* It is profitable to appraise cu
needs for information and the freque
recurring needs, as well as the ne
in long-range planning. Health c
have found that evaluation of the

of recorded data frequently reveals instances in which information has been collected, analyzed, and presented to meet an anticipated need which never materialized or a need that has long since vanished. Economy and efficiency result from limiting the information included on the individual's record as well as from limiting the collection and analysis of data to items that serve the immediate or relatively short-range need and to those pertinent to long-range planning. In determining how often a report should be presented, it is advisable to adjust the frequency of compilation to the use of the data. This will avoid the waste of personnel time that would otherwise be spent in preparing reports that are seldom or never used. Nonperiodic tabulations and special reports prepared only in response to special requests are not as burdensome as routine or periodic preparation of reports, such as at monthly or quarterly intervals, in anticipation of a possible request for the data. Limitation of the data for routine, periodic presentation to items known to be important for analysis and appraisal of each program is the key to assurance that the material will be available when it is needed. Selection of the data to be included in these periodic reports by staff members who are to use the information affords assurance that the reports will be used.

31. *Illustration of review of selected items for reports.* The items that are selected for evaluation of each program will indicate the essential data to be tabulated in both routine and special reports. Three of the items selected for analysis of the illustrative child health conference are: number and type of completed immunizations, number of children attending the conference, and number of consultations. Important data in the consideration of each are discussed below.

32. *Number of completed immunizations, by type and age group of children.* Summary data on the number and types of completed immunizations are important in the study of the [illegible]. For example, evidence that a [illegible] of completed immunizations [illegible] 3–7 months provides a use- [illegible]tion of the service. Pe- [illegible] the percentage of infants [illegible]unity who have received [illegible]tion series for a specific disease with morbidity and mortality reports of the disease for the same age group affords another method of appraising the effectiveness of the child health program.

33. *Number of children attending the conference.* Records of the attendance at a child health conference provide useful data. Additional figures of value in studying the program are those on the number of children whose visits are frequent or only occasional. Moreover, comparison of the number of admissions with the number of visits for each age group in a period provides an important evaluation index. Data on the distribution of children by districts or census tracts help in determining whether the health department is serving the area of greatest need.

34. *Number of consultations.* Data on the use of the consultation service or the number of consultations given during a specific time period provide indexes which are of value to the administration in planning and analyzing each program. Additional data which help in evaluating this service are the number of consultations given by specialists on the health department staff and the number given by other specialists.

Determining Procedures To Be Instituted

35. Many of the procedures to be considered in the organization of record and report systems are revealed in the sample outline. A few are listed and explained below; other procedures are presented in chapter III, Organization of a Record System, and chapter VI, Organization of a Report System.

Appointment System

36. Return appointments are suggested by reference to the periodic physical examinations. Routine methods for recording the date of future visits in an appointment book and for sending reminders of appointments to individuals aid in scheduling visits so that a specific number of examinations can be made at each conference. (For discussion of appointment form, see par. 88.)

Followup Procedure

37. Followup of home and conference visits by members of the nursing staff is aided by

proper scheduling of these visits. A tickler file (fig. 6) for each nurse helps in planning the day's work.

Referral for Medical Consultation

38. Prompt referral for correction of physical defects necessitates the following routine steps:

1. Making appointments with parents to explain the results of the examination and recommend referral.
2. Forwarding to the physician an abstract of the medical, social, and economic data necessary for a thorough understanding of the case.
3. Requesting a record of the results of special examination or treatments.
4. Notifying the health department physician and nurse of the report on consultation.
5. Filing the consultation report in the individual's record.

Requests for Special Services

39. Laboratory, X-ray, and other diagnostic studies are frequently indicated during physical examination. They are not always available at the health center. The following steps are needed for the completion of a request for special services:

1. Advising parents where they may obtain the special services.
2. Completing the forms needed to request the service from the physician or agency that will furnish it.
3. Sending the request form to that physician or agency and asking for return of information on the results of the tests.
4. Notifying the health department physician and nurse of findings on receipt of test results.
5. Entering report of results in the individual's record.

Reviewing Procedures, Data, Resources

40. In general, a multiplicity of records and reports can be found in each division of a local health department. As a result, the majority of records and reports reveal only part of the service of the department as a whole. Four schedules have been prepared to assist the staff in local health departments in making an inventory of their records and reports and in analyzing the uses and accessibility of each. The schedules are: A. Medical, Nursing, and Sanitation Records; B. Indexes to Records; C. Tabulated Reports; and D. Inventory of Personnel and Equipment Available for Office of Records and Reports. It has been found advantageous to complete these forms when the objectives of the department are being outlined. Filling in these schedules may reveal gaps and anomalies in the existing systems and indicate the steps necessary for improvement. A complete analysis may require more detailed review of the entire record and report systems. Circumstances within an organization may necessitate differences among offices in the forms, filing procedures, and other mechanics of recording and reporting activities. The reasons for the existing procedure, when determined, may disclose that current procedures are the best. A review of existing procedures and materials, like that suggested in the schedules, is nevertheless an important step in appraising the value of the record and report systems.

Schedule A. Medical, Nursing, and Sanitation Records

41. Figure 1 illustrates the worksheet for analysis of subdivisions of active and inactive medical records for the tuberculosis division. A similar form should be completed to show the subdivisions of active and inactive medical records for each service division (tuberculosis, communicable disease, venereal disease), for all types of nursing records, and for active and inactive sanitation records. Completing this form reveals the existing sections or groups of records in a health organization, the size of the record forms, the procedures for filing, the location of the files, and the frequency of use of the records.

42. *Number of entries.* The number of vertical columns used indicates the number of record sections currently maintained as separate entities. Many health departments group their present records as indicated on this schedule (pars. 282–287). The medical, nursing, and sanitation records are usually separated: each, in turn, contains se
active and inactive
for service to e
(e. g., typhoid
to the person, giv

sections in the medical and nursing files. Under such a filing system a case is discharged as soon as the treatment or service for the condition is completed and the case record is considered inactive. When the individual receives additional services from the health department, a new record is opened. Other reasons for the numerous sections in this type of filing system are the varying sizes of the record forms, the different methods of filing, and the arrangement and location of the records.

43. *Size of form.* Numerous sizes and shapes of record forms are found in most health departments, and usually result from the fact that each division, or even each office within a division, designs and maintains its own records. Central control of all record forms, preferably under the supervision of a record committee, is essential for a department that wishes to eliminate duplication and unnecessary diversity of forms and make the records accessible wherever they are needed in the organization.

44. *Filing procedures and location of records.* A survey of the records in a local health department may reveal that they are not filed according to the use dictated by the objectives of the department, which ordinarily state that service is to be given to the individual and to members of his family. Considerable time must be spent in finding all the records of an individual and the members of his family. The nursing service records are sometimes in the nursing office and are filed by service category, such as maternity and tuberculosis. The medical service records are kept in separate clinics or offices and in many instances are subdivided by geographic district. Inactive records are usually in a separate location from the active records. The arrangement within the file may further complicate the use of records; a geographic arrangement for a community with a large transient population is certain to be confusing. Often new files are started for each calendar year, necessitating a search of many files when the records of previous service to an individual are requested, since the individual seldom remembers the exact year in which he last received service from the health department.

45. When the health service records are in many different locations it is difficult to assemble the background information needed for effective service. The filing system, methods, and procedures should be such that the health department's objectives can be achieved. Many health departments have found that their records must be consolidated or combined if adequate service is to be given to the individual and his family (pars. 102–104).

46. *Divisions using the records.* The data entered in this section are frequently illuminating. At times it is discovered that the division using the records is a corridor-length distance from the record file and that the personnel in the file room seldom refer to the data. The reason for this anomaly is that files are usually placed where there is available space and when personnel move to another office the files remain. Failure to use existing records can often be traced to the difficulty of consulting them.

47. *Frequency of use.* An analysis of the use of records and the frequency of their use is a valuable clue to the status and usefulness of each group of records. Reasons for the failure to use records should be investigated.

Schedule B. Indexes to Records

48. Figure 2 illustrates the worksheet for analysis of subdivisions of index cards for tuberculosis records. A similar form should be completed to show the subdivisions of index cards for other service records within the health department. This schedule has proved of value in obtaining the data necessary for analysis of indexes within a health department.

49. *Number of entries.* The number of vertical columns used in a schedule indicates the number of indexes maintained within the department. Since a centralized record system needs only one index to medical and nursing records and since a decentralized record system requires only one index in each center, the reason for maintaining any additional indexes should be investigated (pars. 62–65). Differences in the size of the index cards frequently result in a multiplicity of files. Other reasons are differences in the method of filing and the arrangement and location of the files.

50. *Size of form and data recorded.* Index cards are usually 2¼ by 3, 3 by 5, or 4 by 6 inches. When more than one index is maintained and the cards are not uniform in size, the reason for this variation should be determined. Sometimes a large card is used because

SCHEDULE A. MEDICAL, NURSING, AND SANITATION RECORDS
LOCAL HEALTH DEPARTMENT RECORD SYSTEM

Records	Division Tuberculosis							
	Active				Inactive			
Description	District "A"	District "B"	Pneumothorax	Contact	District "A"	District "B"	Sanatorium	Deceased
Size: 5 x 8				✓				
$8\frac{1}{2}$ x 11	✓	✓			✓	✓	✓	✓
Other (specify)			12 x 15					
Filing Procedure:								
Method								
Annual			✓	✓	✓	✓	✓	
Perpetual	✓	✓						✓
Other (specify)								
Arrangement								
Alphabetic			✓		✓	✓	✓	✓
Numeric								
District	✓ (Ward)	✓		✓				
Other (specify)								
Location of Records: Office and room no.	Tbc. clinic 203	Tbc. clinic 203	Pneumo. clinic 203	Tbc. Office 250	Tbc. office 250	Tbc. Office 250	Tbc. office 250	Tbc. office 250
Division Using Records: Office and room no.	Tbc. 203 Nursing 304	Tbc. 203 Nursing 304	Tbc. 203, 210	Tbc. 256 Nursing 360	Nursing 360	Nursing 360	Nursing 360	Tbc. Office 250
Use of Records:								
Treatment	✓	✓	✓					
Program planning	✓	✓						
Supervision	✓	✓		✓				
Other (specify)				ff - 45	family reference	family reference	family reference	family reference
Frequency of Use:								
Constant			✓					
Frequent	✓	✓						
Seldom				✓				
Rare					✓			✓

Figure 1.

many items are entered on the form. The value of each item should therefore be reviewed. The only data essential for identification of the individual and the location of his record are his name, address, sex, birth date, father's name, and the record number.

51. *Filing procedures and location of the index.* Many departments file their index cards by year. This procedure involves only a few cards in each group, but several files must be searched if the year in which previous service was given is not known. Some departments arrange their index cards in the same order as that of the records to which they are a guide. Such an index proves useless for cross-reference purposes and, in addition, wastes time, material, and equipment.

52. The use of the index should determine its location, for this file should be readily accessible to those who need it most frequently. Moving the file to a more appropriate place may encourage greater use and promote efficiency. If a well-located file is not used, it probably contains data that are unnecessary or that are not sufficiently current to be of value. In such event a review of the purpose of each item on the card is in order.

53. *Purpose of file and frequency of use.* The entries in these columns indicate the purpose for which each index was established and how often it is used. Two primary purposes of the index are to identify the individual served and to indicate the location of his records (pars. 92–101). The essential data for these purposes are listed in paragraph 50. These data must be entered routinely and kept current. Special attention should be given to the reason for recording any additional item. Some health departments have used the index card to record information used for special studies, which is usually collected only for specific time periods. When the purpose of the index card is extended to include source material for special studies, such material is likely to be recorded routinely. The routine recording of data used only seldom or rarely should be questioned. In addition, the larger-sized form used to provide space for the additional information requires more space in the file, and, in turn, necessitates the use of additional filing equipment. Recognition of the difference between data recorded for constant use and those required for specific periods will save time, space, and equipment.

Schedule C. Tabulated Reports

54. A review of reports discloses the number of current routine tabulations, their source, and use of the data. Further study of the source of the data, methods of compilation, amount of duplication with other tabulations, time involved in computation, and use of the reports may be needed for clear evaluation of their usefulness. Such study may reveal that some data are compiled without careful indication of their limitations and qualifications. Investigation of the source of each item, the meaning at the source, and the method used to record the item is essential if the final tabulation is to be meaningful. The value of a report must be considered by weighing its usefulness against the cost of its preparation. Analysis of the purposes and actual uses of the data reveals the value of current tabulations and their adequacy. Figure 3 illustrates the worksheet for analysis of each report. A similar form should be completed to show the number of separate reports prepared for each division.

55. The reports prepared for other agencies (local, State, and Federal) should be carefully reviewed and the agencies asked to indicate whether the material supplied is adequate. Not infrequently the answer is that too much detail is included, that reports are needed only once a year instead of monthly, or that the material is now available elsewhere. The needs of these agencies should be considered as well as the needs of the local health department.

Schedule D. Inventory of Available Personnel and Equipment

56. If, after examining its existing records and reports, the local health department decides that centralization is desirable, an inventory of the staff and equipment used for record and report systems in all divisions is needed. The organization of a central office of records and reports may seem an expensive undertaking if the employment of new personnel and the purchase of new equipment appear necessary. However, the completion of schedule D (fig. 4) for each division discloses the number of em-

SCHEDULE B. INDEXES TO RECORDS
LOCAL HEALTH DEPARTMENT RECORD SYSTEM

Division Tuberculosis

Description	District "A" active	District "A" inactive	District "B" active	District "B" inactive	In hospital	Awaiting hospitalization	Etc.	Etc.
Size: 3 x 5	✓	✓			✓	✓		
4 x 6			✓	✓	✓	✓		
Other (specify)								
Data Recorded:								
Name	✓	✓	✓	✓	✓	✓		
Address	✓	✓	✓	✓	✓	✓		
Birth date	age	age	age	age	age	age		
Sex	✓	✓	✓	✓	✓	✓		
Other (specify)	Names of family	Names of family	Names of family	Names of family	Race, Tel. No.	Race, Tel. No. Sputum.		
Filing Procedure:								
Method								
Annual	✓	✓	✓	✓				
Perpetual					✓	✓		
Other (specify)								
Arrangement								
Alphabetic	✓	✓	✓	✓	✓			
Numeric								
District								
Other (specify)						Priority date		
Location of Index: Office and room no.	Tbc. office 250	Tbc. office 250	Tbc. office 250	Tbc. office 250	Tbc. office 250			
Division Using Index: Office and room no.	Tbc. 203 Nursing 304	Tbc. 203	Tbc. 203 Nursing 304	Tbc. 203	Nursing 304 Tbc. office 250	Tbc. 203 Tbc office 250 Nursing 304		
Purpose of Index:								
Identification	✓	✓			✓	✓		
Location of record								
Other (specify)				contacts		follow-up		
Frequency of Use:								
Constant								
Frequent						✓		
Seldom	✓				✓			
Rare		✓		✓				

Figure 2.

SCHEDULE C. TABULATED REPORTS
LOCAL HEALTH DEPARTMENT REPORT SYSTEM

Division Tuberculosis

Title of Report	Source of Data	Compilation of Items		Hours Required per week to		Number Copies Prepared	Purpose	
		Actual count	Estim.	Record on worksheet	Process data		Division and/or individual using data	How used (supervision program planning, etc.
1. Number Tbc. clinic Visits by Age Groups	Individual index card.	✓		3	1	25 (ditto)	Tbc. clinic	Supervision
2. Number Tbc. Home Visits by Age Groups	Daily Report		✓	1	½	25 "	Tbc. nursing Tbc. clinic	Supervision
3. Disposition of Disch. Patients from Tbc. Ward	Daily hospital Report	✓		½	½	" "	Tbc. clinic	Program planning
4. Non-pulm. conditions in Patients by Age Groups	Ledger	✓		1	1	" "	Tbc. clinic	Not used
5. Source of referral of new Pts by Diag.	Ledger	✓		1	1	" "	Tbc. clinic	not used
6. Result of Mantoux Test by age groups	Ledger	✓		½	½	" "	Tbc. clinic	follow-up
7. Etc.								
8.								
9.								
10.								

Figure 3.

SCHEDULE D. INVENTORY OF PERSONNEL AND EQUIPMENT AVAILABLE FOR OFFICE OF RECORDS AND REPORTS

Division Communicable Disease

PERSONNEL

Name	Title	Assignment on Records and Reports	
		Duty (specify)	Hrs. per Wk.
Mary Eriksson	clerk	Searching and filing	20
		Copying records	10
Jane Evans	Secy	Typing follow-up records	15
		Typing weekly reports	5

EQUIPMENT

	Number	Description	Location
Files	2	16 drawers (3x5) green metal	Room 603
Desks	2	Secretarial - left typewriter compartment (oak)	Room 605
Other Equipment	1	Adding machine (hand operated)	Room 602
	1	Typewriter	Room 605
	2	Chairs (typists)	Room 605

Department of Public Health

Figure 4.

ployees and amount of equipment currently utilized for records and reports. It may reveal that sufficient personnel and equipment are already available for a centralized system. Such findings are not infrequent in the smaller health departments in which decentralization of records is rather common.

57. In many rural areas, the secretary to the health director is assigned to members of the nursing and sanitation staffs to assist with records and reports. A study of the need for records and reports and staff review of existing systems, as suggested in this chapter, may reveal that coordination and integration will improve efficiency. The health director's secretary can serve as part-time supervisor of records and reports and can reserve one section of her office as the central record office.

58. If a central record office is to be established the local health department may find it advisable to retain some past procedures, discontinue others, and institute a few new ones. Experience has shown that it is possible to staff the central office with full-time personnel transferred from other divisions and to rearrange the duties of other employees who devote part of their time to records and reports. Desks, chairs, typewriters, adding and calculating machines, files, and other equipment used by these employees can be moved to the new office. The transfer of records which are not in use to a storage room has released space for the new records under the reorganized system. After reviewing available resources, as suggested in the schedule, many departments have found that a central office of records and reports can be established without additional personnel or equipment.

Chapter III

Organization of a Record System

59. Records and reports can serve their purpose adequately only if they are designed to meet the specific needs of the administrative, medical, nursing, and sanitation staff of the health department. Otherwise, they are a mass of cards and papers that occupy space, consume clerical time, and receive little professional attention. No health department can satisfactorily adopt the record and report forms of another health organization without analysis of the suitability or usefulness of the data recorded for its own purposes. To be of value, records and reports must reflect individual programs and objectives of each organization.

60. The use to be made of records by the administrative, medical, nursing, and sanitation staff will determine the filing system, the necessary indexes for cross-reference and followup, and the physical plan of the office of records and reports. Recording and filing procedures that have increased the value of records in several local health departments are presented in this chapter. Cases illustrating the application of procedures used in demonstration projects or observed during the surveys are presented in appendix A.

Control of Records

61. The type of record system adopted will depend on the type of control established. Records can be controlled either by a central office, under the administration of one person or by divisions (with each division maintaining the records necessary to perform its functions). Central control is strongly recommended. One person can then supervise the installation of record systems; devise and maintain procedures, standards, and definitions; and effect the necessary coordination.

Filing System—Centralized or Decentralized

62. Choice of the system of filing records is one of the first considerations in organizing or reorganizing a record office. Two patterns may be followed: centralized or decentralized files. In a central filing system all medical and nursing records are in one office. Similarly, a central system for premises records of the sanitation division brings these records into one place. When the physical plan permits, it is preferable to have the files of sanitation records also located in the central record office.

63. Centralized files of records concentrate responsibility for their maintenance and help to insure uniformity of procedures. In a centralized filing system, central control is frequently automatic since the supervisor of the office of records and reports is in charge of all record and report procedures for the health organization. A simple uniform system can be instituted throughout the health department, facilitating wider use of filing resources and adequate administrative control over the records. In addition, time and money are saved if space and equipment are efficiently utilized, and frequently economies in the utilization of clerical personnel can be effected. A record office conveniently accessible to all divisions is important for proper functioning of a centralized filing system (pars. 228–231). When this consolidation is not possible, an efficient system for delivering records by messenger or mechanical means is essential.

64. The decentralized filing system is one in which the records for each division or district center of the health department are filed within the division or center. The primary advantage of decentralization is that each office has immediate access to the records of its own services. The disadvantage of decentralized

filing is that, in the absence of central control, each division or section may restrict records to its own needs and develop independent methods and procedures for arranging the files, obtaining data, and releasing information. Definitions and standards thus may even vary within divisions, and very little comparable data can be obtained. Illustrative cases I, II, and III, described in appendix A, indicate some of the disadvantages of division control which were reflected in diverse record systems, duplication of effort, lack of efficiency, and increased operating costs.

65. When the administration of a decentralized filing system is centralized, however, record and report procedures can be installed and maintained uniformly for the entire health organization. The use of a decentralized system with central control is becoming increasingly widespread, especially in organizations where the physical plan and lack of transportation service preclude centralizing all records. A branch record office, with clerical employees under the direction of the supervisor of the office of records and reports, serves each center. The records are located where they are most frequently consulted, but responsibility for management of the records is delegated from a central office. Central control facilitates the use of standard procedures as well as the detail of clerks from one record center to another to substitute for absent personnel or to help in meeting peak workloads during certain hours or days. Central control has the added advantages of providing uniform records for all divisions and centers, of permitting interchange of records as well as personnel, and of assuring similar procedures throughout the health department in contacts with other agencies and institutions. In other words, many of the advantages of a centralized system can be obtained when the decentralized system is centrally administered, and many of the disadvantages of decentralization can be avoided.

Record Unit—Individual or Family

66. Once the filing system and form of control have been chosen, the record unit must be considered. The choice of unit should depend on the use of the records. Many health departments have adopted either the individual or the family as the record unit for medical and nursing records and the premises as the unit for sanitation records.

Need for Unit Record

67. *Medical and Nursing Records.* Health departments that are pooling the resources of all divisions to provide integrated services to the individual and the family have recognized the need for bringing together in one folder all data within the organization that pertain to the individual (*4*). Physicians and nurses in many health departments are asking for record systems and procedures that will give them access to all data on the individual. This accumulation of information is of fundamental importance. By consulting records of former contacts with an individual, a physician or nurse new to the staff can learn details of the patient's social and economic problems, services already received from the health department, staff recommendations, and results of diagnostic tests or therapy. Moreover, staff who give frequent services to the same individual are better prepared for each interview when the record of past services has been reviewed just before the visit. Combination of all records of an individual is indispensable in organizations with several specialized programs administered by many divisions.

68. If each division's records are kept apart, a physician may have no way of knowing that the individual is currently consulting another staff member. Duplications of service and diagnostic tests may result; in some cases contradictory recommendations may be made. A nurse may make a home visit at a time when the individual she expects to see is attending a clinic at the health department, with an appointment made several weeks earlier. A physician may only by accident discover during a clinic interview that the patient is receiving home visits by the nurse and is also attending other clinics and conferences maintained by the health department. If all medical and nursing records for each patient are kept together and records and procedures are centrally controlled and efficiently operated, these difficulties and overlaps can be avoided.

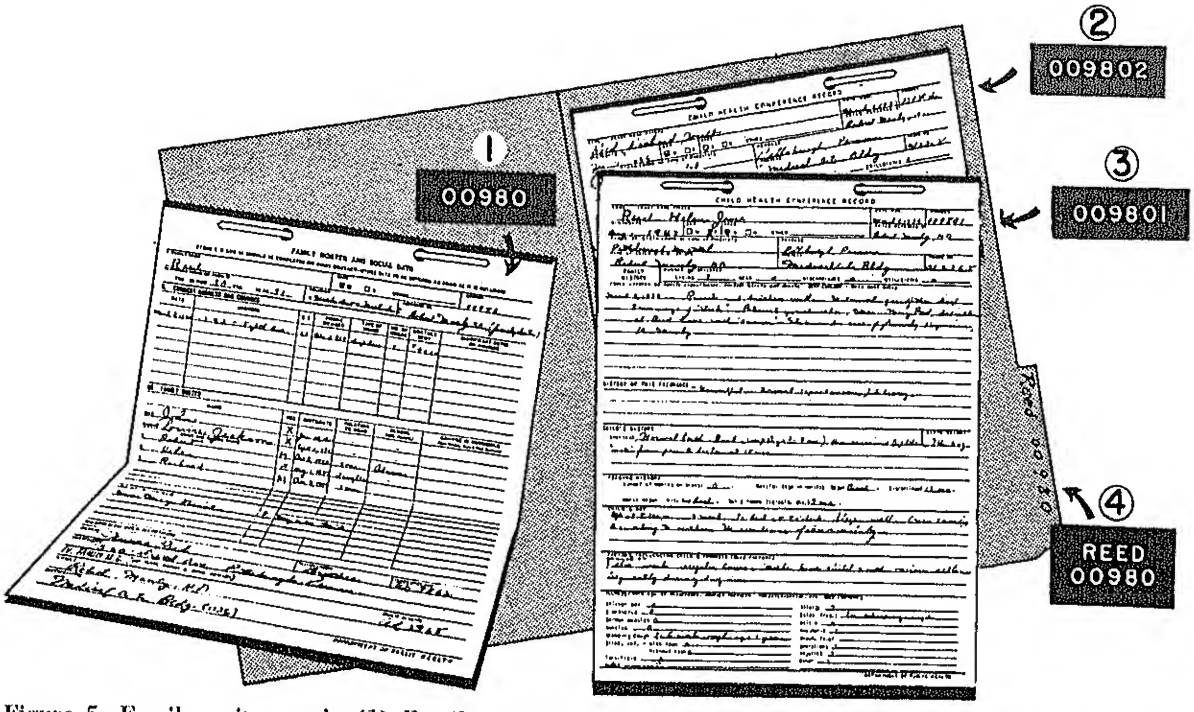


Figure 5. Family unit record: (1) Family record; (2) Individual unit record; (3) Individual unit record; (4) Family unit folder.

69. *Sanitation records.* Service records for premises under routine inspection are to the sanitation staff what medical and nursing records are to the physicians and nurses. Sanitation records are notes on observations and recommendations in inspections, on service given, and on action taken. The need to have all records pertaining to individual premises—inspection, license or permit, complaint, correspondence—in one folder is as fundamental as having all records of an individual together.

Types of Record Units

70. *Medical and nursing records.* Records can be kept for each individual or for each family served. Both types are described below.

Individual Unit Record

71. All medical and nursing records pertaining to the individual are kept together as a unit. Local health departments sometimes find it advisable to separate the medical from the nursing notes (fig. 5). The staff nurse then removes only the nursing record for field visits, leaving the medical notes in the file for reference by the medical staff. Both medical and nursing records are filed in the same folder and are available for reference by members of medical, nursing, and administrative staffs.

Family Unit Record

72. A family unit record (fig. 5) consists of a folder (preferably 9 by 11¾ inches) which contains the following material:

73. *Family data.* This record contains the family roster—notes on social, economic, and health data pertinent to the entire family, on nursing services received by any member of the family, and on the sanitary condition of the premises in which the family lives. Entries are made chronologically.

74. *Medical or health record for each individual.* An individual record is maintained for each person receiving service furnished by a physician on the staff of the health department. The record is used for notation of pertinent health data (preventive and therapeutic) by the doctor and the nurse during field, home, office, clinic, and conference visits.

75. The two types of records in the family unit folder thus combine all medical, health, and nursing records for the family. A distinction should be made between this family unit folder and the family folder system which some health departments maintain merely to keep active nursing service records for one family in a folder or jacket (usually 5 by 8 inches). That system does not make any attempt to combine physically all medical and nursing records for an individual or to keep all records of health

department service to the family in the folder.

76. *Sanitation records.* The premises are most frequently used as the record unit for sanitation records. All records pertaining to the premises—inspection forms, permits or licenses, complaints, laboratory reports, and correspondence—are filed in one folder.

Selection of Record Unit

77. The record unit selected is dependent on the program objectives and use of the records as determined by the administrative organization and the physical plan of the building. If a cancer detection center is in one building in the city and a venereal disease treatment center in another building several miles away, maintenance of one record for an individual for the entire health organization will require some procedure for the exchange of interoffice memoranda, that is, messenger or a mechanical distributing service. This device is necessary to inform each center of services the individual received from other divisions of the health department. Similarly, the unit selected for the sanitation records depends on the objectives and uses of the records in the sanitation division. Aware of the many advantages of unit records, many health organizations are studying available resources and the procedures which will aid them in establishing a unit record.

Filing Procedures

78. In addition to the decisions regarding the systems and methods of recordkeeping—whether the records should be centralized or decentralized, whether the records and their maintenance should be under central or division control, and whether the record unit for medical and nursing records should be for an individual or a family—it is necessary to consider filing procedures. The use to be made of records will determine which procedure will be most advantageous.

Arrangement of Records

79. The filing procedures to be considered in the arrangement of records include: alphabetic, numerical, geographic, chronological, service category, clinic, and activity. The alphabetic and numerical procedures are used most commonly for the individual or family unit record. The geographic or address procedure is used frequently for premises records.

80. *Alphabetic method.* The alphabetic method is useful for a small, fairly stable file which does not expand rapidly and thus require shifting the records. This method is not practical for offices filing large numbers of records. It is slow and subject to error since decisions on the position of a record are complicated by variations in spelling names. In hospitals, where filing procedures have been under study for many years, the alphabetic method of filing medical records is considered obsolete (*11*).

81. *Numerical method.* Numerical filing has proved advantageous for filing records in departments which have a large number of records. The unit number, clearly visible in the upper right-hand corner of the record, makes it easy for the clerks to locate a record and to file it in its proper position. The numerical method of filing records requires a numbering system and an index for cross-reference. Various methods are used for assignment of numbers.

82. The most practical plan in the central filing system for medical and nursing records is to assign a number to an individual on his first admission at the center. He retains this number, which is known as his unit or health department number, for all subsequent visits. It identifies all his records in the central office.[1] The numbering system may be used for the family or the individual record unit (see "Record Unit—Individual or Family," pars. 66–77).

83. In the decentralized system of recordkeeping a single-unit number may be used for an individual even if some of the services he receives are from divisions or centers located in separate buildings in different sections of the community. A single-unit numbering system, however, requires a central index; this type of index is discussed later in this section.

Aids to Followup

84. Every health department is faced with the need for followup of individuals or estab-

[1] For description of unit numbers and procedures for installing a numbering system, see paragraphs 132–139; for description of application of procedures, see chapter VIII, pages 50–65.

lishments. An important function in record-keeping is to provide methods and procedures to remind the personnel of the time set for the necessary visits. Five aids in followup—the tickler card, appointment form, referral record, interoffice memorandum, and calendar memorandum—are described below:

85. *Tickler card.* A followup file or tickler is a valuable aid to the staff of many organizations. It is most frequently used as a "work-file" by each member of the nursing staff in the health department to schedule home visits; it is used also by the sanitation staff as an aid in followup of inspections. The tickler card (fig. 6) is usually on card stock, 3 by 5 inches in size.

86. In the nursing division, a tickler card is completed for each individual who receives a service. Minimal data, such as name, address, birth date, service category, and the unit record number, are entered for reference. The "blocks" are used to record the date of the next visit. Guide cards for each date in the month serve to separate the cards by date of the scheduled visit. Some nursing divisions have found it helpful to use the tickler card to schedule clinic and conference visits as well as home and office visits. These dates, however, are usually included only if the nurse plans to confer with the individual during the clinic session. Procedures have also been developed within a nursing division to place a red check over the date to indicate that the scheduled visit was not made and a black check to indicate that the visit was made. Colored tabs or indicators help to flag cases that need special attention.

87. Since the tickler cards constitute a work-file for each nurse, the nursing division within the health organization can devise a card to fulfill its needs. Nevertheless, within the nursing division the procedures for the tickler file should be standard and each nurse's tickler file should be organized and maintained according to the standard procedures established. The use of this card for followup of home visits by nurses is described in chapter VIII. In addition to its use for followup and for scheduling visits, the tickler file cards provide a ready reference for filling in "out cards" (fig. 15) when records are withdrawn from the record

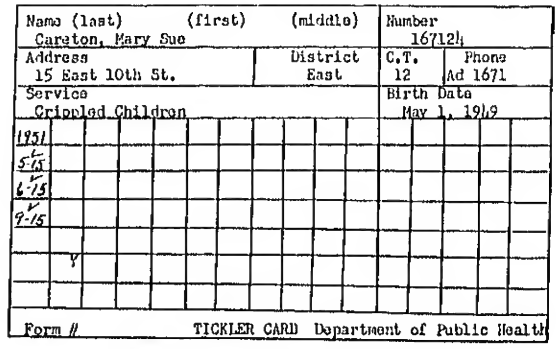


Figure 6. Tickler card.

office and for notifying individuals of an approaching—or missed—appointment.

88. *Appointment form.* Special forms designed to aid in scheduling appointments for conferences or clinics are an asset and contribute to the smooth functioning of each division. Mimeographed forms for a looseleaf notebook are most practical. One form is used for each conference session. The date and name or number of the session appear at the top of the page. The minimal data necessary for each appointment are name of the individual and his unit number. Frequently, a notation to indicate whether the individual is scheduled for a first visit or a followup visit is advantageous in planning the clinic day, since a first examination requires more time than that needed for subsequent visits. The use of the form within the organization will determine the data needed. The lists of daily appointments, besides serving as guides in scheduling visits, can also be used as check lists for making "out cards" in requesting records from the record office.

89. *Referral record.* A referral record (fig. 7) is recommended for interagency and interdepartment use when individuals are referred for service, examination, or treatment. This form lists the standard reference and identification data needed by the agency or person to whom the request is made. The use of the reverse side of the record for the reply eliminates the need to include the identification data in a letter or form.

90. *Interoffice memorandum.* The interoffice memorandum (fig. 8) is used in health departments with decentralized record systems as a device for the exchange of information

Name (last) (first) (middle)		Sex	Race	Number
Leonard, Janet Mary		☐M ☒F	☒W ☐N ☐Other	167262
Address	C.T.	Telephone	Birth Date	
421 East 16th St.	032	He - 4621	Jun. 10, '40	
School	Nearest Relative	Relation	Address	
Jefferson	John Jacob Leonard	Father	Same	

TO: Charles Abbott, M.D.

Reason for Referral: Child tires easily at play and was referred to school clinic by teacher. History of rheumatic fever 1949. Examination shows evidences of cardiac enlargement, mitral insufficiency, and stenosis. Recommendation desired regarding any limitation in exercise and follow-up.

Date: June 6 1951 — Referred by: James Martin, M.D.

Form # — REFERRAL RECORD — Department of Public Health

(reverse side)
Report of Visit

Physician's Recommendations: Child has inactive rheumatic heart disease with mitral insufficiency and stenosis, and cardiac enlargement. No evidence of decompensation. Recommend no limitation in usual activity, but exclusion from strenuous play. I would like to see the child again in 6 mos. unless there is evidence of activity before this.

Date: June 15, 1951 — Charles Abbott M.D.
(Signature)

Public Health Nurse's Report

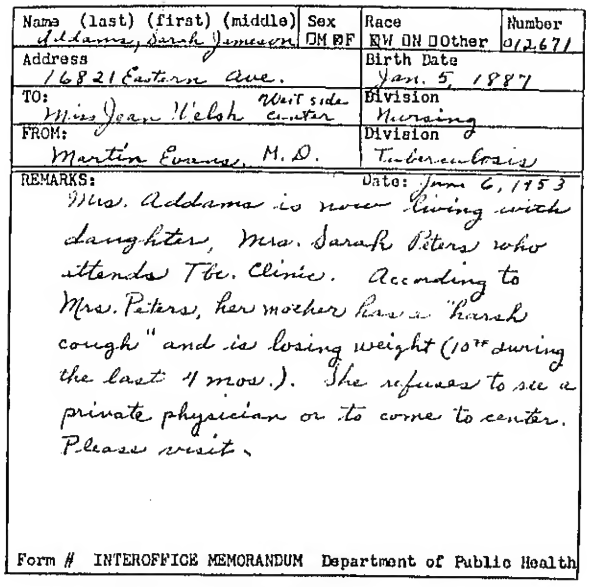
Date
195

(signature) Public Health Nurse

Please return by mail in the enclosed addressed envelope.

Figure 7. Referral record.

among divisions. A frequent complaint in many local health departments is lack of knowledge of the service to an individual or establishment and of the observations made by the staff in each division that serves the individual. Such observations are valuable to the personnel in other divisions of the organization. The completion of the interoffice memorandum by the clinic secretary is a method whereby the physician can notify the nurse of findings of the clinic visit and the nurse can keep the physician informed of the results of her home visits. This form is also used for the exchange of information between the sani-



Name (last) (first) (middle)	Sex	Race	Number
Addams, Sarah Jemison	☒M ☐F	☒W ☐N ☐Other	012671
Address: 16821 Eastern Ave.		Birth Date: Jan. 5, 1887	
TO: Miss Jean Welsh West side center		Division: Nursing	
FROM: Martin Evans, M.D.		Division: Tuberculosis	

REMARKS: Date: June 6, 1953

Mrs. Addams is now living with daughter, Mrs. Sarah Peters who attends Tb. Clinic. According to Mrs. Peters, her mother has a "harsh cough" and is losing weight (10# during the last 4 mos.). She refuses to see a private physician or to come to center. Please visit.

Form # INTEROFFICE MEMORANDUM Department of Public Health

Figure 8. Interoffice memorandum.

tation division and the medical and nursing divisions. In a centralized record system this form is not needed for exchange of information between the medical and nursing staff since all records of medical and nursing services to an individual are filed in one folder.

91. *Calendar memorandum.* A followup method is necessary in the sanitation division to determine the premises to be inspected. The calendar memorandum is an aid in recording dates for routine inspection of the premises and for followup visits to determine compliance with recommendations. This calendar also serves to post dates for investigations of nuisance complaints and for any necessary followup visits to private premises. The sanitation divisions serving small areas have found a calendar pad sufficient for this purpose. Larger divisions frequently use a vertical file with the guide cards arranged by date. The notice for followup is placed back of the date indicated on the form. Some departments have found it advantageous to make an extra carbon of the form used for investigation as the "followup notice." This file is routinely searched each day and the contents are distributed to the persons concerned. Some offices routinely clear this file the day before the date indicated in order that the next day's work can be planned to include the followup visit.

Indexes to Records

92. The index to records is a guide to the location of the files and is also a source of minimal identifying information on each person who has received medical and/or nursing services. It consists of cards, usually 3 by 5 inches in size, filed alphabetically. The only data necessary for identification of an individual and location of his record are his name, address, sex, birth date, father's name, and the record number.

93. Index cards may be kept on an annual or perpetual basis. The advantage of keeping an annual index (one that begins with the admissions of January 1 and closes with the admissions of December 31) is that the current index is small enough to be kept on a desk or in a small cabinet. The disadvantage is that several indexes must be searched when an individual cannot accurately recall the preceding year or years in which he received service. The perpetual index, in which all cards are interfiled, makes it unnecessary to look in more than one place for an index card. The file is manageable if adequate numbers of guide cards are inserted. The numerical filing system (pars. 81–83) necessitates the establishment of an alphabetic index as a cross-reference.

Family and Individual Name Indexes

94. Choice between a family or individual name index will depend on the use to be made of the records. When the family is the health department's unit of service, it is advantageous to have a family index; when the service is directed to the individual alone, a family index is unnecessary. Index cards are filed alphabetically. A phonetic arrangement of the alphabetic method has been adopted by some health departments. It is particularly advantageous in departments that have a large number of index cards in their files.

95. *Family name card.* Figure 9 illustrates the family name card used in the family index of one health department. Minimal identification data are recorded on the heading. The name of each individual receiving service is recorded on the lower section of the form. The unit numbers assigned to the family and indi-

viduals are entered in the spaces indicated. If the numerical method of filing records is not used, the family index is of value for reference to the individual and family receiving service. Family index cards are filed alphabetically according to the name of the head of the family. In a decentralized system in which branch record offices are maintained in each district health center and the service is directed to the family unit, the family index serves as the central index for the health department as a whole, and each center keeps an individual name index for reference to its record file.

96. *Individual name cards.* Figure 10 illustrates the index card which is used as a cross-reference file to medical and nursing service records. A similar card may be designed for the sanitation records as a cross-reference to records of establishments and premises. When only one or two visits are made to an individual or premises and no additional visits are anticipated, it is possible to use the lower half of the index card for the necessary notations. This device obviates the need to fill out a record form.

Premises Index

97. The need for an index to premises records is dependent on the number and type of references made to this file. When the records to which the index refers are filed according to the manner in which requests are received, there is no use for an index or cross-reference file. On the other hand, when the records are filed by number and numerous requests are received by name of the premises, an alphabetic index of premises is essential (see case IV, appendix A).

Head of Family (name) Carston, Leon John			Number 16712
Sex ☒M ☐F	Race ☒W ☐N ☐Other		Birth Date June 18, 1900
Address 15 East 10th St.			C.T. 12
Address			C.T.
Members of Family	**Birth Date**	**H.D.Number**	**Health Unit**
Mary June (M)	July 10, 1907	167121	East
Leon John (F)	June 18, 1900	167122	East
Charles Sam	Sept. 1, 1935	167123	East
Mary Sue	May 1, 1949	167124	North
Form #	FAMILY NAME CARD Department of Public Health		

Figure 9. Family name card.

Name (last) (first) (middle) Carston, Mary Sue		Number 167124
Sex ☐M ☒F	Father's Name Leon John	Birth Date May 1, 1949
Address 15 East 10th St.		C.T. 12
Address		C.T.
Date adm.: May 10, 1951		
Form #	INDIVIDUAL NAME CARD Department of Public Health	

Figure 10. Individual name card.

Central Index

98. Some health departments with widely separated units have found it necessary to have one index for reference to the records of all individuals receiving services. This index becomes a central index which makes it possible to find out quickly which health center or unit has provided service to the individual. If each center or unit maintains its own index, the central index, of course, is a duplicate consolidated central file of the separate indexes. In the absence of these separate indexes, the central index is the sole index for the health department. Because many health departments are considering the installation of a central index, some of its advantages and disadvantages are discussed below, before worksheets and other devices useful in maintaining the index are described. Illustrative case V in appendix A gives details of procedures for installing a central index for use with the individual name card, while chapter VIII describes procedures when a family name card is used.[2]

99. *Advantages.* A central index permits use of a single file in a decentralized record system to ascertain whether an individual has been served by a member of the health organization and to determine the location of his record. The central index is of value to the administrative staff when it is necessary to have prompt access to an individual's record in answering telephone or mail requests, and to the medical and nursing staff for reference to the

[2] Health departments that have a housing section in their sanitation division should have entries on these cards to provide reference to the sanitation records, so that greater coordination of medical, nursing, and sanitation services can be effected.

Name (last)	(first)	(middle)	Sex	Race
Carston,	Mary	Sue	☐ M ☒ F	☒ W ☐ N ☐ Other
Address: 15 East 10th St.			Birth Date: May 1, 1949	
Head of Family: Leon John			Relation to Individual: Father	
Health Unit: North			Date of Registration: May 10, 1951	

TO BE COMPLETED BY OFFICE OF RECORDS AND REPORTS

No previous registration of above unit number assigned 16724

	Birth Date	Health Unit	Unit Number
Previous registrations of above:			
Previous registrations of family members (list each name below):			
Mary June (M)	July 10, '02	East	167121
Leon John (F)	June 18, '00	East	167122
Charles Sam	Sept. 1, '35	East	167123

Form# CENTRAL INDEX EXCHANGE RECORD Department of Public Health

Figure 11. Central index exchange record for family index.

individual case history, services received, and diagnostic tests. Review of past records may reveal that special tests have already been made or are considered unnecessary.

100. *Disadvantages.* The greatest disadvantage of the central index is its expense since, in a decentralized record system, this index duplicates the indexes of each health center or division. Additional personnel are needed to keep the central index current, check the records of previous admissions, and furnish the messenger service.

101. *Central index exchange record.* The exchange record, a worksheet, is an aid in the maintenance of the central index. The branch record office completes the upper part of the form when an individual makes his first visit to the center and registers for service. The form is forwarded to the central record office, where the central index is searched to determine whether the individual has been previously registered in the health department. If no card is found, a name card is made for the central index and the exchange form is returned to the branch office with the assigned number inserted in the appropriate space. If, however, the central index has a record of previous registrations, the lower part of the form is completed specifying the dates of admissions for previous service, the health center or centers which gave the service, and the person's identification number (the unit number). When the branch record office receives the form, it may request the previous medical and nursing records from other centers if the physician and nurse wish to review them. Figure 11 illustrates the form used when the central index is a family index; figure 12 is an example of a form which is useful when the central index is an individual index.

Reorganization of Existing Systems

102. Several health departments, after completing schedules A, B, C, and D (see pars. 41–58) have realized that their filing systems,

Name (last)	(first)	(middle)	Sex	Race
Martin	Adam	Joseph	☒ M ☐ F	☒ W ☐ N ☐ Other
Address: 20 West 15th St.			Birth Date: July 1, 1948	
Mother's Maiden Name: Marian Jean Higgins			Father's Name: Adam John	
Health Unit: East			Date of Registration: June 1, 1951	

TO BE COMPLETED BY OFFICE OF RECORDS AND REPORTS

Previous registration: ☐ No Unit number assigned _____
☒ Yes Unit number 18812

Year Registered	Health Unit	Year Registered	Health Unit
1949	North		
1950	South		

Additional notes:

Form # CENTRAL INDEX EXCHANGE RECORD Department of Public Health

Figure 12. Central index exchange record for individual index.

methods, and procedures needed reorganization. The majority of these health departments find that their records and even their indexes are in many separate sections. In many health departments records are maintained for each case. An individual receiving service for typhoid fever, pregnancy, and venereal disease has three separate records. Readmission to the prenatal service for a subsequent pregnancy gives rise to another record, as does a readmission to the venereal disease service for treatment of a reinfection.

103. The health department staff, while recognizing the disadvantages of the present arrangements of records, sometimes fear that combining the files will entail formidable costs in time and personnel. Offsetting these costs, however, is the time expended in filing and searching records under present arrangements. Health departments have found that setting a specific date, as January 1 or July 1, to start interfiling all records for an individual and all index cards yields almost immediate benefits and time savings that can be noted in a few weeks. As extra minutes are saved from routine procedures the other records and indexes can be gradually interfiled, and a central record system with one index results in a relatively short time. This method avoids delays in service to the professional staff and interruption of other record procedures.

104. Analysis of the schedules by health organizations that have two or more health units often reveals a duplication of records among the units. This duplication of records frequently reflects duplication of histories, examinations, and diagnostic tests. Staff time and materials are wasted and the recipient of service is annoyed and confused by the repetitive questions and examinations. Installation of procedures for the interchange of information among units often results in coordination of service and, accordingly, better service to the individual. The entire record system need not be reorganized to achieve benefits. Many organizations have improved their service by pro-

viding for a flow of records among units. Case VI in appendix A illustrates the development of procedures for the transfer of information among separate health units. All service organizations should plan for adjustments in their record systems, especially in fields in which program content as well as program procedures must take account of changing needs and methods of operation. A rigid record system that must be drastically revised when programs are expanded or modified should be avoided.

Chapter IV

Mechanics of Recordkeeping

105. After completing the analysis of the functions and content of records and reports and the methods of obtaining data, and after reaching a decision on the filing and indexing systems to be adopted, attention should be directed to the mechanics of recordkeeping—equipment, supplies, record forms, reference aids, and number assignment. "How To File and Index" (*27*) provides helpful suggestions for all concerned with principles and practices of recordkeeping. "Textbook of Office Management" (*13*) is a valuable reference for the office manager.

Equipment and Supplies

Record Files

106. The choice of filing equipment depends on the use to be made of the records. Frequent use of the records requires steel files with roller-bearing drawers. Files should be so placed as to make the best use of available light. Sufficient aisle space to permit passage of employees when a drawer is pulled out is recommended. The width of the space between rows of files will depend on the number of people who use the files simultaneously.

Index Files

107. The two methods of card filing that are most frequently used are the vertical and the visible.

108. *Vertical card file.* In the vertical system the cards are filed vertically, so that each is completely covered by the preceding one (fig. 13). Files may be purchased as needed, with drawers for cards of any standard size. Expansion of a vertical file creates no problem since additional drawers, guides, and cards may be added when necessary. The main disadvantage is the chance of misfiling, because cards have to be removed from the file when new data are entered. One device for vertical filing is the tub desk which provides for filing cards in trays on the top of the desk. The trays are so arranged that the record clerk can have the trays in front of her or on either side.

109. *Visible card file.* The visible system is one in which a drawer or tray holds cards so arranged that a part of each card is visible when the drawer is open (fig. 14). Guide cards are not required in this system. Need for expansion of the file should be anticipated when the system is installed and space should be left in each drawer for insertions. Completed cards are transferred to a vertical file after being replaced by new cards in the visible file. The ease of reference and the fact that guides are not necessary are the main advantages of the visible index. Disadvantages include the high initial cost of installation and the mechanical problem of shifting cards to make room for additional cards.

Sorter

110. If more than 100 records are filed daily, some type of sorting device is needed to facilitate arranging the records in the desired order. The sorter may be a special piece of equipment designed for that purpose or it may be merely a group of improvised guides in an empty file drawer or box.

Folders

111. Since the majority of medical and nursing records comprise two or more pages, the use of a manila or kraft folder is recommended. Folders are an asset to any file. They not only group the papers that belong together but they keep them upright in the files and protect them from damage.

112. *Sequence of items in folders.* A standard sequence for assembling the forms in a folder is essential. The sequence may be

chronological or by department units; whichever is adopted should be followed consistently if annoyance and waste of time are to be avoided. Prompt identification of special forms (clinic, laboratory, X-ray) is facilitated by the use of colored pages, colored borders, or an extended tab on the right-hand margin of the page. Before colored forms are adopted, however, the possibility of future microfilming of the records should be considered. Some colors provide poor backgrounds for photographs.

113. *Fasteners.* A fastener, that is, a staple or binder, that holds the pages together and attaches them to the folder assures the safety of the papers. Such a fastener is especially valuable when records are handled frequently and are transferred between offices and health units. The fastener also aids in preserving the page arrangement within each folder. Binders, however, take extra drawer space and require additional time when it is necessary to insert pages or remove them from the folder. Therefore, the advantages of security against loss, greater convenience in use, and neatness of folder and file drawer should be weighed against additional clerical time, the extra drawer space involved, and the initial cost of purchasing the fasteners.

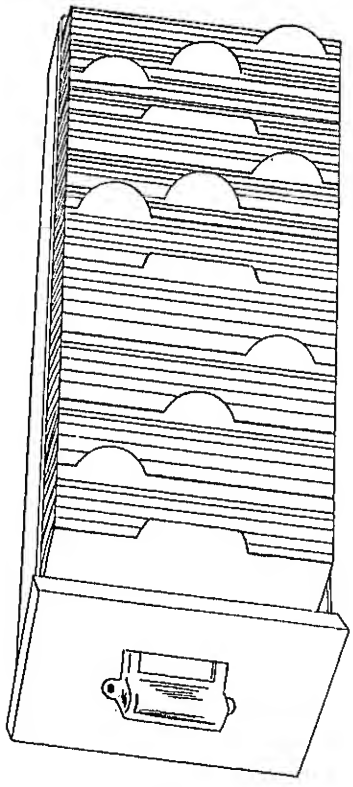


Figure 13. Vertical card file.

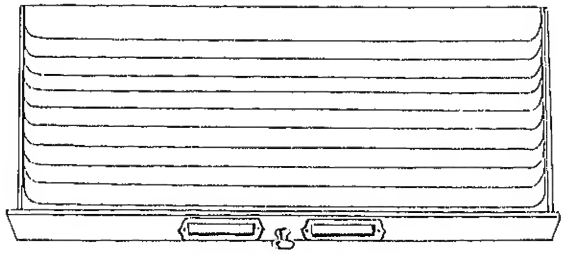


Figure 14. Visible card file.

114. Paper clips and pins are hazards in a file drawer. Clips are the cause of many lost records, for they often become detached or catch additional papers which should be filed elsewhere. The sharp points of pins may injure those who handle the papers.

Guides and Labels

115. Guides within a file help in rapid and accurate filing and in locating records. A guide separating each 25 cards is often advocated; the number of guide cards needed, however, depends on the extent to which the file is used. The more frequently used files will require more guides than others. Labels should indicate the contents of each file drawer by such notations as Ap–Bi or 1001–1250 to show the section of the alphabet or numerical series included.

Record Forms

116. The maxim "it is easier to add than to subtract" is especially true when applied to record forms. The number of forms seldom remains stationary or decreases. When the activities of a department are expanded and it is necessary to record additional data, a new form is often designed and added to the supply. New forms may also be introduced by a staff member who has transferred from another organization or by a staff member who is not familiar with all existing forms. Everyone desires to work with a form with which he is familiar. Many times a form becomes a personal tool instead of one that serves the entire department. Approval of forms by a central authority or committee is recommended. The review of forms is usually one of the functions

of the record committee (par. 209), of which the supervisor of the office of records and reports should be a member. Some health departments have found it advisable to schedule an annual review or inventory of all record forms.

Purpose

117. The objective of the form and its functions should be carefully studied with the question, "Will this form accomplish the purpose for which it is intended?" This question, of course, can be answered in the affirmative only when the information entered is accurate and complete. If it cannot be answered affirmatively, attention will first have to be directed toward making sure of the competence of the recorder and improving the conditions under which the data are obtained. Next, each step in the use of the data recorded should be studied. The wording and position of the entries, the method of completion (by hand or typewriter), the size of type, need for ruled lines, and need for carbon copies are all determined by the use to be made of the form. Forms should, of course, be designed to yield the data required. Each term used to describe the information desired should be specific and clear. Thought directed to the future use of the forms will produce the desired results.

Title and Spacing

118. Every form should be adequately identified by including the title of the form, name of the health department, and name of the city. This identification should appear in the same place on each form. The official name of the department should be used; if Washington County Health Department is the correct name it is undesirable to have some forms labeled Health Department of Washington County or Health Department of the County of Washington. It is also helpful to assign a number to identify each form. This number usually appears in the lower left-hand corner with notation of the quantity ordered, date of printing, and date of revision.

119. Wherever possible, information that appears on all forms should be in the same position on each form. Having the patient's name and case number appear on the first line, with the name on the left side and the number on the right, will not only aid in reference but also assist in rapid and accurate filing. Care in spacing items on a printed form (both across the page and vertically) pays dividends. It should not be necessary for the recorder to have to crowd sentences into inadequate space in one part of the form while several square inches are provided for only one word in another. If spaces between the horizontal lines on forms are to be filled in by typewriter, they should correspond to the single, double, or triple typewriter spaces to avoid the need to use the variable line spacer.

Type Face and Paper or Card Stock

120. Thought should be given to the type face and the size and quality of the paper or card stock. Consultation with a printer is of value both in selection of type face and in setting up the page. If possible, the size of all forms for the records should be uniform (preferably 8½ by 11 inches).

121. A standard size for index cards (2¼ by 3, 3 by 5, or 4 by 6 inches) is strongly recommended. Even if it is necessary to have more than one index file, a future combination of files should be anticipated. Combination of cards of more than one size is awkward and a frequent cause of error.

122. The paper stock (grade and weight) on which the form is printed is determined by the use of the record. There are many grades of paper or card stock, ranging from 100-percent rag to sulfite mixtures. Records that are frequently used and of permanent value require the best—100-percent rag content. Records that are used for a short period are considered "worksheets" and require only an inexpensive sulfite paper (*26*). The weight of paper for record forms that are attached to a backer or filed in a folder is usually 16- to 20-pound bond; 90- to 100-pound bristol or 100- to 110-pound index is a satisfactory weight for forms that are to be printed on card stock, such as index cards, out cards, and identification cards.[1]

Quantity to Order

123. It is false economy to order a large supply of printed forms that may suffice for sev-

[1] The figures cited refer to commercial weight.

eral years. Whenever the health department accepts new responsibilities with added services and activites, the forms may become obsolete and their usefulness destroyed. Use of a form that no longer facilitates service and analysis is far more costly than the expense of printing a new form.

124. It is most difficult to estimate the quantity to order. Consideration given to the following time periods will aid in determining this quantity:

1. The length of time it takes for approval of reprinting the form (review of additions or deletions by all staff members who use the form), placing the order, and delivery. These processes take 1 to 3 months in most instances. It is wise, however, to consult the printer in advance to find out if additional time must be allowed because of paper shortage or other reason.

2. The estimated length of time the form will be used without change in content or form. In general, 1 to 3 months is an adequate period for trying out a new or revised form. Those that have been used for several years with no indication of the need for change may serve for a longer period. Most organizations have found 6 to 9 months to be the "safe period" for estimated use of forms that are seldom changed.

125. The quantity of forms used each month multiplied by the number of months estimated above in item 1 plus item 2 will furnish a guide to the quantity to order—a 9 months' or a year's supply for "stable" forms or only a 3 or 4 months' supply for those that are "on trial."

Directory of Forms

126. A directory or atlas of forms—a volume which contains samples of all forms used in the department—with a statement of the purpose of each form and instructions for its use, arranged by division and by subject is an asset to every organization. It is invaluable to the record committee for reference to the types of forms in existence. If a directory has not been prepared, the few hours necessary to collect and arrange the forms are well spent. In many instances duplicate types of appointment forms, laboratory requests and reports, and the like, as well as duplication of data on two or more forms that would be completed for the same individual or establishment become apparent only when forms are brought together in this fashion.[2] The directory also makes it possible to discover variations in the position of the items included in different forms.

Reference Aids

127. Reference aids are tools to assist in the location of records. Like the records, the aids should be carefully considered according to the need of the department. The use of records will determine the reference aids that are necessary. When properly selected and maintained, these aids will encourage the use of records. On the other hand, when reference aids are lacking or inadequate the usefulness of records will be impaired. Indexes are samples of reference aids. Since family and individual indexes are an important consideration in plans for record systems and procedures, these indexes were discussed earlier in pars. 94–96. Diagnostic indexes and disease registers representing special techniques for collecting data on specific diseases are discussed in chapter V.

128. Three types of reference aids are included here: out cards, cross-reference cards, and identification cards.

Out Card

129. A special card (8 by 10 inches) should replace records when they are temporarily removed from the file. This card, called an "out card," contains space for entering the record number, date of withdrawal, name of patient, and name of person borrowing the record. It should be made out when the record is requested and inserted in the file when the record is withdrawn. Out cards usually stand about a half inch higher than the records in the drawer. They facilitate inserting the record in its proper location when it is refiled. Figure 15 is a suggested form for these out cards. The data recorded will of course vary with the needs of the health department. As illustrated, each card can be used many times; the last entry indicates the current charge.

---

[2] It is also advisable to maintain a file or directory of discarded or discontinued forms, noting on the margin of each the reason for discontinuance. This procedure helps to prevent reinstating all or part of a form that has already proved useless or inadequate.

OUT CARD

Number	DATE	NAME OF INDIVIDUAL	Withdrawn By
16941	Jan 10, '51	Mardy Jones	A. Barton
12462	Feb. 6, '51	Abe Pearson	M. Arnold
11347	Mar. 19, '51	Suzy Saunders	A. Ring
18369	June 1, '52	Sam Kozarek	L. Jenafer
19671	July 7, '52	Mary Pearce	A. Barton

Form # Department of Public Health

Figure 15. Out card.

Cross-Reference Cards

130. Cross-reference cards aid in referring from one part of an index to another. Names that have two or more spellings or individuals that use two or more names require such references. Reference cards, with entries as "Adam see Addams," "Braun see Brown," "Bemis, John, see Balcour, Jarvice," and "Smith, Elizabeth, see Jones, Elizabeth Smith," help in locating records.

Identification Cards

131. A small identification card (2¼ by 3 inches) is frequently presented to an individual

on his first admission to the department for service. This card contains his name and unit number. These items give necessary information for reference to his record when he presents the card at the registration desk or when he telephones or writes to the physician or nurse. In addition, the card may be so designed that the reverse side can be used for notations of the date, time, and place of future appointments to clinics or conferences.

Number Assignment

132. The value of a numerical arrangement of records was discussed earlier (par. 81); and the advantage of the unit number in identifying individuals and families in a report system is considered in paragraphs 183–185. If a health department decides that a unit numbering system is advisable, consideration should be given to the following: the use of the unit number in all divisions where service records are prepared; the date of initiation; the number series to be used; the method of assignment; and the orientation of all staff personnel who will use the number.

Intradepartmental Use

133. The unit number is a means of identification. The more extensive its use throughout the department the greater are its benefits. A review of the filing arrangement of X-ray readings in an X-ray division, the individual diagnostic studies in the laboratory division, and service records within the clinics and nursing division will frequently reveal that the unit number can be used to advantage in many divisions. Because the unit number is an aid in identification, its use on all record forms is a method of assuring speed and accuracy in filing.

Date of Initiation

134. Since the installation of the unit numbering system is frequently accompanied by changes in procedures in the record system and in the registration of individuals, it is advisable to set a definite date for its initiation, such as January 1 or July 1. All changes in procedures dependent on the number are made at the same time. Setting a definite date for this installation is a method of coordinating all procedural changes.

Unit number	Name of individual
000001	Martin, Mamie
000002	Stevens, Joseph
000003	Olson, Stanley
000004	
000005	

Figure 16. Page from number book for individual unit number assignment (6-digit series).

Number Series

135. The number series to be adopted warrants special consideration. If no numbering system has been used previously in the health department, 00001 may be selected for the first number in the unit series. When another numerical system has been in use in any part of the organization, however, potential confusion should be avoided by starting the new series with a number higher than any used before. For example, if numbers between 00001 and 50000 have already been used the new unit series could begin with 60001.

Assignment Method

136. *Individual unit.* A five- or six-digit number is recommended for the individual unit number series. In small communities where estimates indicate that no more than 99,999 individuals will report to the department for service, a five-digit number will suffice. Larger communities will require the sixth digit. In a six-digit numbering system the first person receiving service on the date the system is installed receives the number 000001, the second person gets 000002, and so on. The number is retained by the individual for all future records.

137. *Family unit.* In a family numbering series, a five-digit number is assigned to the family the first time a member receives service from the health department following the installation of the numbering system. The sixth digit is used for individual members of the family (par. 179). Thus the first family to receive service receives the family number

00001; the first individual to receive service is assigned number 1 in the sixth digit—000011. The second member of the family receives the same family number with 2 in the sixth digit—000012. The individual retains this number as long as he receives service from the department. Installation of the family unit numbering series is described in chapter VIII.

138. *Number book.* The assignment of a number is made from a number book. This book may be a bound or a looseleaf ledger. Figure 16 illustrates the number book for the individual unit number. The name entered opposite the number is the only essential entry. The age, or date of birth, and sex may be recorded to aid in identification. Additional detail is unnecessary. The individual name index (par. 96) is essential for cross-reference when the individual unit numbering system is used. The assignment of the family number is made from a similar number book. With the family unit numbering system, the surname and given name of the head of the family are listed instead of the name of the individual receiving service. The family index (par. 95) is essential for reference to the number assigned to the members of the family.

Orientation of Personnel

139. Proper orientation of all personnel who have contact with service records, from the clerk who registers individuals to the director of the health department, is an essential step in the installation of the numbering system. The purpose and value of the new procedures should be presented, with explanations of the effect on each division. A written outline of the new procedures, presented at a staff meeting where there will be opportunity for questions and discussion, is advisable. Proper orientation will avoid errors which could result in delays in service.

Chapter V

Disease Indexes and Registers

140. The purpose of disease indexes and registers is to provide a separate record of current data relating to specific diseases. Even though details of each case under the care of the health department are on the individual's record, it is frequently necessary to refer to certain minimal data that have been recorded by diagnosis in the administration of programs relating to the prevention and treatment of illness. For certain diseases, especially those that are notifiable, data should be included in the index or register on every case reported, whether or not the case is under the supervision of the health department.

141. Diseases may be recorded by two methods—indexes and registers. The use of the data determines which method should be employed. A diagnostic index card (fig. 17) contains space to record pertinent information on several cases. The register card, on the other hand, is a summary record for each patient. Two types of disease indexes and the register are described in the following pages.

Indexes

Index of Acute Communicable Diseases

142. Mustard (*21*) outlines a recording system for acute communicable diseases, explaining the use of the administrative communicable disease record and giving basic procedures for the development of this type of file. The acute communicable disease card contains a minimum of pertinent facts recorded on the patient's record and is an administrative tool in the health department. A card is filed for each case reported to the health department. When the State regulation requires that the original card completed by the physician be forwarded to the State office, it is necessary for the local health department to record on a file card the data essential for its use. The index includes not only the cases under supervision of the health department but those under treatment by a private physician or by a physician employed by a public or private agency. The card contains space for the date of notification to school authorities that a school child has been found to have a communicable disease and to owners of dairies that a communicable disease has been reported from the home of one of their customers. The cards are filed alphabetically by the patient's last name within a separate section for each specific disease. The use of data from these administrative records for the compilation and analysis of morbidity statistics is described by Rosenau (*24*), Mustard (*20*, *21*), and Puffer (*22*).

143. A chronological card, of the same size as the cards for the administrative communicable disease record or the central registry, is recommended when the index or register contains a large number of records for any disease. This card is placed first in the section of the file for each disease. The name of the disease for which the card carries a chronological summary is written across the top. The essential data recorded on the card are: date (of receipt of report); series number of the disease case (not the patient's unit number); and the patient's name. The series number begins with "1" for the first case of each disease reported in a year; therefore, the last number in the series for any given disease represents the total number of cases recorded during the year (*21*). This card makes it possible to check quickly for high incidence of cases and to determine trends for any specific disease.

144. The venereal disease epidemiological program instituted a disease index known as a central registry. This index was utilized as a control measure and consisted of an index of names, addresses, and other identifying data

on all persons known to have, or suspected of having, a venereal disease. This index was designed primarily to help in eliminating duplication in followup activities and in preventing reinvestigation of persons who are already under treatment. The advantages of the venereal disease registry include the following (9):

1. Increasing the efficiency of case finding by pooling all specific identification.
2. Facilitating the exchange of information on contacts among health agencies or their subdivisions.
3. Locating geographically the foci of infection.
4. Providing data which can be utilized to appraise current efforts and to aid in the development of future procedures.

Many health departments have discontinued the use of the venereal disease registry because of changes in the treatment of this disease.

Diagnostic Index

145. *Purpose.* The value of providing a method of recording minimal data on all diagnoses is questionable. The health department, however, frequently needs a device which will permit prompt listing or review of all cases of a noncommunicable disease, such as cancer, diabetes, rheumatic heart disease, and the like. The diagnostic index is a tool which, with a minimum of clerical effort, will permit prompt access to records for a disease that is of especial significance to the community. Generally, these records will be selected from the cases served by the health department staff.

146. In many instances the index will obviate the need to compile certain monthly and annual reports by providing a list of all cases of a given diagnosis. It also is a useful guide to material needed for special studies on the number of cases of a disease in a specified age, sex, and racial or community group. The number of cases of diabetes, for example, may indicate the need for a special clinic. Knowledge of the geographic area in which the patients live will often reveal the most appropriate location for that clinic.

Sample card. A sample diagnostic
ard (fig. 17) is presented as a suggested
or the health departments that have

Diabetes Mellitus 1952

Unit number	Date	Age	Sex	Race	Residence	Attending physician
01342	Jan. 15 '52	15	F	W	10 E. 5th	Dr. C. Jones
13671	May 5 '52	20	M	N	121 E. 41st.	Dr. C. Smith
46128	Oct. 20 '52	18	F	W	115 E. 10th	Dr. B. Howard
						1953
47208	Jan. 3 '53	30	F	N	206 E. 40th	Dr. C. Smith
36106	May 10 '53	42	M	W	21 W. 2nd.	Dr. A. Evans

Form # DIAGNOSTIC INDEX CARD Department of Public Health

Figure 17. Diagnostic index card.

determined their need for this index. The size of the card is dependent on the amount of data to be recorded. Preferably, it should conform to the size of the file drawers of available equipment (3 by 5, 4 by 6, or 5 by 8 inches). Since the diagnostic index is a reference tool and not a complete record, the headings on the index card should be simple and concise. To provide adequate cross-reference to the basic records it must obviously include the unit number for the patient's medical and other records. In addition to that entry, certain other information is useful for research and analysis, for example, date of diagnosis or disease report; age, sex, race, and residence of patient; and name of attending physician. Additional data, such as associated diseases or treatment, may also be entered, but only after careful consideration of the need for the information.

Explanation of Headings

148. Entries on the card comprise a diagnostic index for the diseases for which the health department wishes to compile data. The entry of a unit number would indicate that a record for an individual receiving treatment for the disease is on file at the health department. The absence of a number would signify that the case was not treated by the health department staff but was under the supervision of another agency or a private physician.

149. Each of the seven columns across the card is filled in for each case of the disease. If space remains on the card at the end of a year a line may be drawn under the last entry and an entry for the next year made on the following line. The dotted line in figure 17 illustrates the method of showing entries for a new year.

150. Column 1 contains the unit number for each person receiving service from the health department for whom the diagnosis was made. This number identifies the patient and assists in locating his record.

151. Column 2, "Date," refers to the date the case was reported or recorded. It permits analysis of the number of cases of the disease reported during a specific period.

152. Column 3, "Age," helps to identify a patient if only the diagnosis and approximate age are known. This column is also useful in determining the prevalence of the disease among age groups.

153. Columns 4 and 5, "Sex" and "Race," contribute to the correct identification of the patient and are useful in determining the prevalence of a disease among sex or racial groups.

154. Column 6, "Residence" (address, census tract, or geographic district), is an important guide to the location of cases of a disease within a community. Any possible concentration of a particular disease in one area can be ascertained from the index cards for the disease in question.

155. Column 7, "Attending physician," provides for notation of the name of physician attending the case.

156. Other data which may be entered on the diagnostic index card will depend upon the health department's need for additional facts.

Method of Recording Data

157. Entries are made on this card from the medical record on which the specific diagnoses appear. If the index card is filled in immediately after the individual's record is returned to the record office from the clinic, the diagnostic index will provide an accurate and current cross-reference to records.

Registers

158. The three types of disease indexes just described, while adequate for recording minimal data, are sometimes considered inadequate for providing data on chronic diseases when an active control program is in progress. During the course of prolonged illness, clinical and socioeconomic changes may occur. Services to the individual and administration of the program as a whole are facilitated by maintaining a special register. This register contains pertinent information on the medical examinations, diagnostic findings, and treatment, as well as socioeconomic data on patients who are under medical and nursing care and on individuals that are in need of such care. The maintenance of a register permits the local health department or agency to have available a central file of all cases of a specific disease which have been reported. The register is considered by many as an indispensable tool for case holding, case management, evaluation of activities, and definition of local problems (*25*). The functions and methods of maintaining a register for the rheumatic fever program have been outlined by Bellows (*5*). Two manuals on the organization and maintenance of tuberculosis registers have been published (*17, 25*), and a manual on cancer study has been issued (*14*). Details of the mechanics of operating a register are, therefore, omitted from this monograph. The methods and procedures described in the references cited can be adjusted to any other disease.

159. Any recording system, like the proverbial chain, is only as strong as its weakest link. To be of service to a health department the record must be accurate, complete, and current. Each person concerned with a register should not only be convinced of its value, but be willing to put forth the effort required to make the file a success (*17*):

> The installation of a case register should not be undertaken unless the health agency in charge has both the firm intention and the capacity to make the greatest possible use of it as a practical administrative aid, rather than merely to keep the register in operation. . . .
>
> Even though a visible file is a superior administrative device which facilitates control of this chronic disease [tuberculosis], the register will not serve the purpose of clinic records, nursing records, case reports and laboratory records. The health administrator who recognizes the truth in this statement will save himself serious disappointment and will eliminate the waste of considerable time, effort and funds.

160. The register should be installed only after it is decided that the objectives of the organization indicate the specific purposes which this type of record will serve and after careful analysis of the cost of both installation and maintenance. In many cases, maintenance of a register requires a large expenditure of clerical time. The survey of 25 local health departments which preceded preparation of this report revealed that many that maintained tuberculosis registers used them only for follow-up of nurses' home visits, yet all data from the medical and nursing visits were recorded—a task that required the full-time services of one or more clerks. A simple tickler or calendar followup (pars. 84–85) would have been an adequate device for flagging each case for a home visit, while review of the patient's original record would have furnished the details necessary to prepare for the visit.

161. Administrators of programs for diabetes, cancer, and the like are considering the

need for a register for these programs. In making the decision to install these registers, the danger of introducing additional places to record and to search for information should be recognized. In most instances, unit medical and nursing records plus a diagnostic index or a simple tickler or followup system will give adequate results at a considerably lower cost than that required for a register.

Utilization in Morbidity Reporting

162. Case entries in the indexes and registers may be used to check the completeness of reporting. The notifiable diseases that are recorded by either system represent cases that have been reported to the health department. Specific instances of duplicate reporting or failure to report may easily be verified by referring to index or register entries for the disease. This procedure is especially valuable for chronic diseases such as tuberculosis and undulant fever, where the case is often not reported or is reported more than once. Periodic verification of the completeness of reporting of one or more diseases may require special surveys. Comparing the number of cases of notifiable diseases recorded at hospitals, sanatoriums, and schools, and those reported on death certificates with the cases recorded in the health department index or register will frequently indicate a low incidence of reporting for some diseases (*28*).

Chapter VI

Organization of a Report System

163. Health departments are recognizing increasingly the value of reports and compilations of data that will enable the staff to analyze the quantity and quality of services and to determine the additional services required. The types of existing health services and scope of programs vary among health departments, depending on the community's population and habits, topography, natural resources, and the available personnel, facilities, and functions of other health agencies in the community. The variance among programs in scope and development emphasizes the value of analyzing activities and achievements against the background of community requirements. Analytical reports, in addition, can serve as tools for the evaluation of performance of staff members; can aid in the study of administrative procedures; and can furnish data essential for informing the community of its resources for health service and unmet needs.

Present Report Systems

164. Two reports are common to the majority of health departments for study of medical, nursing, and sanitation services—the statistical activity report and the narrative report (*21*). Both are periodic reports and are summaries of services rendered. Their chief purpose is to determine the relation of the health department's programs to the needs of the community and to justify future budget requests. Originally, in most health departments, the activity report was tabulated monthly; later, quarterly; and more recently, only semiannually.

165. A review of existing reports in the survey of health department record and report systems revealed that, in actual practice, the activity report has become a mass of detail, frequently presented as a series of monthly reports for each program. The tendency is to portray every aspect of the service given and to itemize the most minute activity in an effort to have a wide range of detailed information available. Hours are spent compiling information because "someone asked for it years ago; maybe someone will ask for it again." It is evident that reports have developed over a period of years in a hit-or-miss fashion; in only a few instances are they based on careful, advance plans. Many reports present data that are duplicated in other reports; the advantages to be derived from consolidating reports are seldom investigated; and some reports are prepared periodically despite the fact that their original purpose has disappeared or has never materialized.

166. Quantitative units in existing reports frequently lack comparability and uniformity. Thus in one health department, where each division prepared its own reports, a visit represented three different entities. In that health department it would be impossible to derive a meaningful total of visits by adding figures reported by each division, because of the following variance in definition of a visit: Each household visited regardless of the number of individuals served; each individual receiving service; and each service category (for example, tuberculosis, maternity) on which the individual received treatment or health guidance. In the latter instance, one visit to an obstetrical patient with minimal tuberculosis and measles would be recorded and reported as three visits—maternity, tuberculosis, and communicable disease services.

167. For meaningful records and reports, uniform and explicit definitions of terms which may otherwise have different meanings among the personnel are obviously essential. The same definitions and units of count should be used by the entire staff. Otherwise, one member of the staff recording an immunization may

count each dose in a series as an immunization, another may count the completed series as one immunization. In recording the number of urinalyses, one member of the staff may count a test for albumin or a test for sugar as a urinalysis; another may count only the complete urinalysis. The possibility of variations in definitions must be considered when reports from different sources are compared. The administrative staff of many health departments considers its monthly and annual reports of little value, recognizing that the figures are estimated or totaled without allowance for duplications, diversity of definitions, and other discrepancies.

168. The examples cited represent typical rather than atypical situations. Very few local health departments have a central office to compile or supervise compilation of reports. Even in these few, duplications within reports and variations in definitions or standards frequently persist. Personnel responsible for assembling and computing data seldom if ever receive adequate training, instruction, or supervision.

169. Dean Clark cites the lack of comparable and valid data on activities of local government agencies as follows (*10*): "No ready source of information was available for the health activities provided by local governments. There is almost a complete absence of assembled data from the local level, except for what can be learned from State and Federal agencies. Such information as these agencies are able to supply is known to be fragmentary since it generally covers only those specific activities wherein State and Federal financing and participation extend to the local communities."

170. Information on the total population served, the area of the community from which people came, why they sought health service, what health conditions were found, what was done, and the result or disposition of the case is seldom available for an evaluation of the service furnished to the community or the extent of need for those services. Instead, the division directors of many health departments have only quantitative data on effort expended from which to study their programs, for example, number of visits, number of X-rays taken, number of immunizations given. Interviews with health officers and supervising nurses reveal that their evaluation of the effectiveness of their programs and their plans for the future are mainly based on subjective factors—the opinions of the general public, parents, and physicians, as well as personal judgment.

171. Increasingly, the administrative and divisional directors in local health departments ask for figures showing the number of individuals served. The most frequent question heard is: "Are we giving a large number of services to a small number of people?" Other questions are: "What is the average number of visits per individual, by age group? Are the health centers and the facilities for service in the right location? Are we centralizing our personnel where the greatest or smallest number of individuals report for service? How many individuals are admitted for service for the first time in a given period?" [1]

172. Requests for data on the number of families served are occasionally voiced by personnel of health departments that are concentrating on family service. Their question is: "Are we really serving whole families? If we had reports to show that an increasing number of individuals in a family receive services from our organization we would feel that this objective is being accomplished."

173. Directors of sanitation divisions are asking how many improvements have been accomplished. They feel that this figure would aid them in analyzing the work performed, in assessing the type of work to be done, and in evaluating the personnel of the division. In most instances these divisions now record only the total number of inspections made.

174. The need for basic information to aid in evaluating services was stressed in the "Report of the Working Group on Service Statistics" at the 1951 Public Health Conference on Records and Statistics. Ten basic principles were enumerated for the development of meaningful service statistics. These principles, reproduced as appendix B of this monograph, state the purposes of service statistics, the need of relating them to baseline demographic and economic data, the importance of

[1] The current practice of discharging all cases at the close of one calendar year and readmitting them as "new" cases in the following year is now being questioned by many persons who wish to evaluate existing programs.

measuring services directed to individuals and their environmental hazards, and the value of an unduplicated count of individuals receiving services from the health department.

Steps and Methods in Analyzing Need

175. The basic steps in an analysis of the need for reports, as presented in chapter II, are (1) outlining the objectives of the health department and the methods of accomplishing those objectives; (2) determining the content and functions of records and reports and the procedures to be instituted; and (3) reviewing present procedures, the use made of the material, and the facilities and personnel available for compiling reports. The steps taken in determining the need for reports are of great importance. Collaboration of the administrative and professional staff who are to use the data increases the value and utilization of the documents. Each report, then, can reflect the work of the health department as a whole rather than merely the activities of a single program.

176. The review of existing records, tabulations, and reports in order to analyze the source and validity of the data, the use to which they are put, the methods used in compilation, and the cost in terms of personnel time expended is a similarly important step in planning for a well-organized report system. Many routine tabulations can be abolished after the review indicates that they are seldom or never used. Tabulations and reports are costly, not only in terms of paper consumption, equipment, and space but also in terms of the staff time required to transcribe, compute, and prepare the material for presentation. Reports prepared for allied agencies (local, State, and Federal) should be included in the review of existing reports. The need for specific data on current programs varies. Opinions of the individuals to whom the reports are sent regarding their need for all the items in the report may reveal that, although all the information compiled was of value earlier, only one or two of the figures are now necessary. Often it will be found that the material in tabulations prepared for one purpose can be used for other reports in the local health department. If the dual objectives are considered in the preparation of the material, some routine reports can be eliminated.

Steps in Organization

Selecting Minimum Data

177. The items selected by the administrative and division directors as essential for evaluation of the services furnished by the health department indicate the specific data to be included on the worksheets. Care should be taken to select only the minimum data for routine reports. Special reports for the data desired may be prepared at irregular intervals or once only as other summaries are needed. Chapter VIII gives examples of the minimum data selected for a reporting system in a demonstration project.

Unit of Count

178. *Unit useful for analysis in health department.* The selection of the unit of count for tabulation and analysis is one of the first steps in the organization of a report system. Units for the medical, nursing, and sanitation services are listed below. Four units are most applicable to reports of medical and nursing services—activity, case, individual, and family:

MEDICAL AND NURSING UNITS

179. *Activity.* The item of service given an individual—visit, X-ray, immunization.

Case. An individual admitted the first time for a particular condition. A time interval may be involved, such as first admission during the current year. The condition rather than the individual determines the admission as a new case.

Individual. A person who is under care of, or receiving guidance from, a staff member.

Family. Members of immediate family (father, mother, children); individuals related by blood or marriage; adopted children and children at board living in the same household of which one or more than one member receives service from staff personnel of the health department.

180. The activity and case units are most frequently used in medical and nursing reports prepared by local health departments; the individual unit has been reported less frequently; the family unit is analyzed rarely. The objectives defined by the professional staff of the department and the items which they select as pertinent in the evaluation of the programs determine the unit or units of count. Each unit, in the order listed, represents a progressively more complex and, accordingly, a more costly analytic procedure, but a more meaningful measure of the effectiveness of service.

Sanitation Units

The two units most applicable to reports of sanitation services are activity and premises.

181. *Activity.* The item of service furnished to premises or to an establishment—visit, inspection, installation, number of specimens examined.

Premises. The plant, establishment, location, or specific ground area which is inspected or under supervision of the health department.

182. The reports reviewed in sanitation divisions during the survey of 25 local health departments revealed that many gave totals for the number of activities during a given period. The divisions using the premises unit find that it provides a more meaningful measure for analysis of results of the service.

183. *Choice of unit.* The unit of count selected will depend on the types of data needed by the health department staff for evaluation of services. Reports as used in some health organizations do not indicate the need for more than the relatively simple quantitative analysis that can be obtained from the case or activity unit. These units will suffice, for example, in rural areas where the health department staff knows the people in the community and their health requirements. In these instances, personal opinion and subjective evaluation serve for qualitative assessment of the services performed. Walker and Randolph (*26*) describe case and activity units and the methods of obtaining the data for reports. These two units are mentioned in this monograph only for reference or comparison.

184. For analysis of the effectiveness of the services of a larger health department, however, and for data that will aid the department and the community in determining health needs and resources, reports must be in terms of units that can be related to population data, mortality and morbidity rates, and other available socioeconomic indexes for an area. The use of the same service areas in the community for all health department divisions (medical, nursing, sanitation, dental) is of great value in analyzing the services performed in each district in terms of baseline demographic and economic conditions. Some health departments in communities that have census tracts have adopted these tracts as their areas for statistical analysis (*7*, *8*). Departments in communities that are not separated into census tracts can also analyze their work on an area basis by using the existing township boundaries or by dividing their territory into districts. All the field activities of personnel in the department should be organized on the same district basis.

185. Analysis of the number of individuals served by the health department yields data which are essential in the evaluation of many programs. For example, knowledge of the number of individuals receiving service from the venereal disease division in any given period, their sex and age groupings, the area of the city in which they reside, the health service received, the results of the various treatments, and the disposition of each case is essential for analysis of the effectiveness of the program. More concrete evidence of progress or lack of progress is available than can be obtained from the activity or case unit. Evaluation of services given to the family as a unit is of increasing concern to health personnel, and the importance of the family as a unit of service both in the prevention and treatment of disease is recognized by most health directors. Richardson (*23*) stresses the effect of health and illness of each family member on the others in the family unit and also emphasizes socioeconomic factors of illness. Health administrators, aware of the value of service to the entire family, are considering ways of measuring services in terms of families served.

186. *Identification method.* A method for identification, described earlier in the discussion of records, is essential for the individual or family unit of count. For procedures used in the organization of a report system see also chapter VIII. Two methods of identification are suggested—by surname and by unit number:

187. Surname: Individual unit—The surname and given name of the individual are used for identification. Other pertinent data included are: address, birth date, name of closest relatives (parents, husband). The record or card is filed alphabetically according to the surname. Family unit—The surname of the family and the given name of the head of the family are used for identification. The given name of each family member and his birth date are essential for identification of the family members. The records or cards of the family members are filed alphabetically according to surname and given name of the head of the family.

188. Unit number: The unit number system already described (pars. 132–139) is used to identify the individual and/or family. By this method each individual receives a number on his first admission and retains this number on all subsequent visits. Several individuals may have the same name; each has a dif-

ferent number. The family is identified by the first five numbers of a six-digit numbering system and each family member by the sixth digit.

Method of Assembling Data

189. The source of the material for the reports and the method of assembling data are important phases in the preparation of reports. Too often in the computation and analysis of figures these two phases are overlooked. Many erroneous interpretations of statistical reports result therefrom.

190. *Use of worksheets.* The use of a special worksheet for entering pertinent items of services is common practice in many health organizations. The "daily report" used as a source for the "statistical activity report" is familiar to most health personnel. The same method is being adopted to compile data on individuals and families. The preparation of a separate report form for each individual visited is not as time-consuming as might be imagined. The individual's name, unit number, address, and birth date can be obtained from his medical and nursing records. The date of visit can be entered and other data, such as sex, race, place of visit, service category, type of service given, and disposition of the case can be arranged on the form for check marks. See sample worksheets illustrated in figures 18 and 19.

191. *Use of original record.* The original medical and nursing record is sometimes used as the source of statistical data for reports. In such case, the information to be included in the report is transferred to a ledger sheet for either hand or mechanical tabulation.

Use of Samples

192. Sample studies, in which data are compiled and analyzed for only a part of the total group served, permit many shortcuts to otherwise lengthy and time-consuming tabulations, particularly in the preparation of special or nonperiodic reports. Determining the size of the sample as well as the method of selection requires knowledge of statistical procedures. If the local health department has no statistician or statistical consultant on its staff, advice and help may be obtained from the statistician of the State health department in selecting a representative sample of the records for use in the compilations and analysis.

Method of Tabulating Data

193. The method of assembling the basic data and the method of tabulating the recorded material are interdependent and should be considered simultaneously. Both hand and machine tabulations can be used.

194. *Hand tabulations.* A ledger is frequently used as the basis for hand tabulation. It is usually a large looseleaf or bound ledger page with 25 to 30 horizontal lines and 10 to 12 vertical columns. The procedures for medical and nursing services and for sanitation services are described below.

Medical and Nursing Services

195. Entries for services furnished by the medical and nursing divisions are usually entered on the worksheet in chronological order; each line represents a unit of service. Headings similar to those on the worksheet shown in figure 19 are used for the vertical columns: name, birth date, sex, race, place of visit, service category, type of service given, and disposition. When data for the individual or family are desired, sections of a page may be reserved to record services furnished to an individual. Totals for each column are entered at the bottom of each page. At the end of the month the totals for each page are computed. While this method is useful for reporting on the activity unit, it is time-consuming for analysis of the individual or family unit.

Sanitation Services

196. The ledger page for summarizing sanitation services is in use in many health departments. The ledger is often referred to as the chronological record; each page is devoted to the premises under routine investigation, and entries summarizing each inspection are in chronological order. Besides its use in assembling data for the monthly report, the ledger provides a long-time record of each establishment inspected. Any phase of the inspection may be reviewed by reference to specific columns, and frequent violations involving the same defects can be readily noted. The ledgers make it possible to discard inspection records which are more than 6 months or a year old. They are also invaluable for cross-reference to inspection and laboratory reports and are helpful when sanitation ratings and average bacterial counts are computed for grading purposes. In addition, these ledger records permit a review of the dates of inspection as an aid in checking on the routine followup of establishments supervised if an inspection record is lost or an error is made in posting the date for the followup visit on a calendar memorandum. New staff members can obtain necessary data about establishments from the ledger.

197. The most common method of filing ledger pages is by type and name of establishment (alphabetically within each premises grouping, such as dairy, restau-

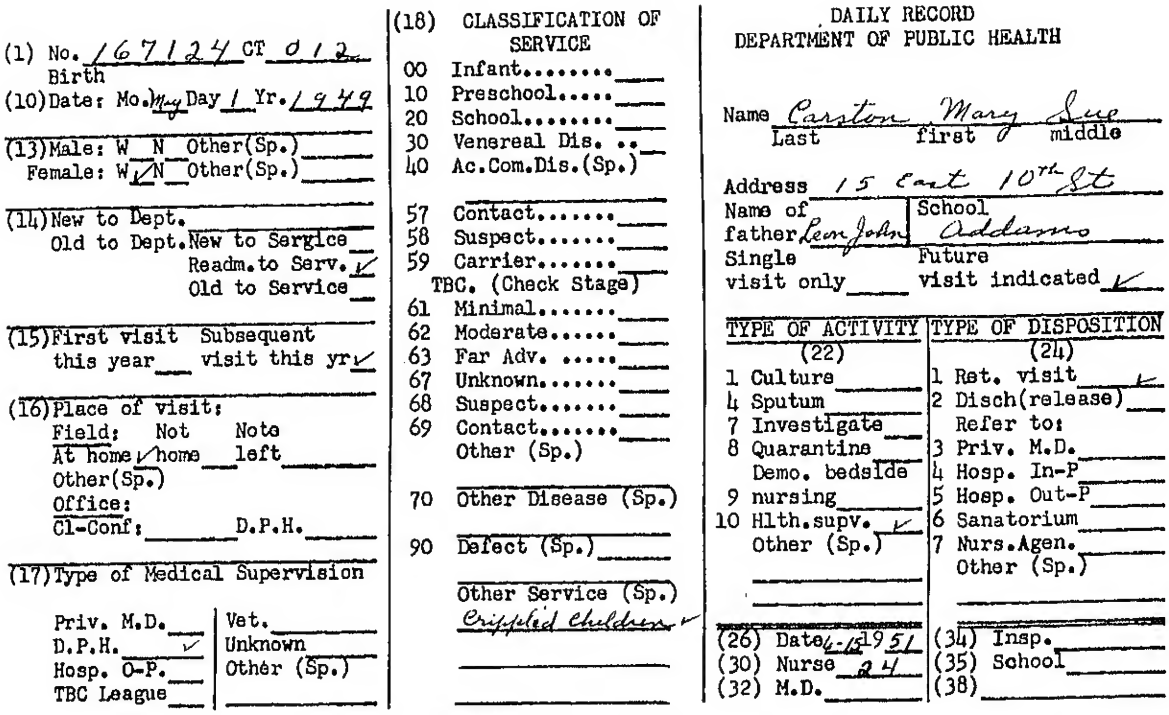


Figure 18. Report form for home visits.

rant, or school). Having the ledger pages or cards arranged in an order different from that used in filing the inspection records affords a useful cross-reference to the records; the ledger may thus be used as a substitute for a card index file. A summary page of the ledger or a card for use as an index to each group of premises in the file is recommended for large local health departments. Establishments subject to routine inspection are listed in alphabetic order with columns showing successive dates of inspection. Reference to this page assists the sanitarians in determining the establishments that have not been visited within a given period.

198. *Mechanical tabulations.* Three methods for machine tabulations or other mechanical tabulations are described below. Puffer (*22*) gives more detailed explanations of the key punch and marginal punch methods.

Key Punch

199. Key punch, sorting, and card detecting machines reduce the tabulating work when the volume of records warrants use of these machines. The unit number punched on each card identifies the individual, the family, or the premises. The sorting machine and duplicate card detector aid in analyzing and totaling the services furnished and in determining the number of individuals and/or families served. In general, only a large city health department will have justification for this type of equipment, but in many instances smaller health departments can avail themselves of the machines located in the community or elsewhere in the State. Commercial companies which rent or sell the machines also have service departments which are equipped to do routine and special tabulations at a minimal charge.

200. The key punch card has been substituted for the ledger by many health departments. This card permits the selection of many different items for analysis; it minimizes the time necessary for making cross-tabulations of the types of service furnished, the reason for and results of the service, and for summarizing the activities of personnel. Sanitation divisions that have replaced the ledger with the key punch card keep their original inspection records for a longer period than the 6 months or a year which was customary when pertinent data were preserved in the ledger.

Mark Sense

201. The mark sense, similar to the key punch described above, is a method of mechanical tabulation adopted by some health departments in recent years. By means of the mark-sense device, pencil or pen marks on cards are mechanically converted to punched holes in the columns of the card. A card is completed by the field staff for each visit, replacing the usual daily report and eliminating some of the clerical work necessitated by the key punch method.

Marginal Punch

202. Some health departments have adopted marginal punch cards to aid in the compilation of their reports and to provide the data needed by the staff on the number and characteristics of individuals and families served. In preparation for tabulations on the

I Type of Clinic (18-19) C.H.C.
II Place North Central
III Clinic Number (16-17) 10

IV Date: Month June Day 16 Year 51

26	27	28	29	30	31	32	33	34	35	36	37	38
6	1	6	1	2	5	0	4	0	0	0	0	2

V Doctor: J. Hendricks-04
VI Nurse in Chg.: Other Nurses: O. Foster-25 a. Jones

16	17	18	19
1	0	2	0

VII No. Vol.: 1 — No. Clerks 1 — No. Nurse Assts. 1

VIII (1-6) Number	IX Name	X Address	XI (7-9) CT	XII (10-12) Birth Date	XIII (13) Sex - Race	XIV (14) New to Dept.	XIV (14) Old to Dept. New to Service	XIV (14) Old to Dept. Readm. to Service	XIV (14) Old to Dept. Old to Service	XV (15) Visit This Year 1st	XV (15) Visit This Year Subseq.	XVI (20-21) Diagnosis	XVII (22-23) Type of Procedure (Immuni., Text X-Ray) (specify)	XVIII (24-25) Disposition	XIX Remarks
112611	Smith, Peter	108. 25th St.	012	2-6-51	M'-W	1 ✓				1 ✓		-	DPT - 1st. 31	01	
006412	Evans, Helen	5W. River St.	013	12-1-50	F²-W				4 ✓		2 ✓	-	DPT - 3rd 33	01	
012606	Benson, Wm.	1601 Allen Rd.	013	3-1-51	M³-B	1 ✓				1 ✓		-	DPT - 1st 31	01	
060412	Morvin, Robt.	101 North Adam	012	11-20-50	M'-W				4 ✓		2 ✓	-	DPT - 3rd 33	01	
124205	Taylor, Alice J.	15 Lakeshore	100	12-10-50	F²-W				4 ✓		2 ✓	-	DPT - 3rd 33	01	
136101	Collins, James	167 Lakeshore	012	1-7-51	M'-W				4 ✓		2 ✓	-	DPT - 2nd 32	01	

Form # DAILY REGISTER AND SERVICE ANALYSIS Department of Public Health

Figure 19. Report form for clinics and conferences.

individual served, one card is completed for each individual receiving service. This card may vary in size; it is usually 5 by 8, 8 by 10, or 10 by 12 inches. The heading includes minimum data for identification. The body of the card is reserved for entries of the service furnished. The cards may be punched by hand or by an electric keyboard punch machine. For routine or special reports, the cards may be sorted by hand with the use of a needle in the indicated space on the margin, or by a special machine known as a selector unit machine.

Drafting Format of Final Tabulations

203. Many pitfalls, complications, and errors can be avoided if advance planning for a record and report system includes preparation of skeleton forms for all tables to be included in the reports. It is especially profitable to design these skeleton tables before worksheets are drafted, so that the choice of units, terms used, and sequence of items may be uniform at all stages of tabulating, computing, and preparing the data for release. A detailed review of the prospective tables by the staff personnel who are to use the reports may bring suggestions for deletions, additions, or other changes which, at this stage, can be adopted without difficulty. A change instituted after forms are printed and final instructions have been given to the staff is not only time-consuming, but is a frequent cause of misunderstanding and error.

Designing Report Forms

204. The report form or schedule is an indispensable tool in the preparation of each report and, because of its importance, requires great care in preparation. Each item to be included in the form should be scrutinized for validity and essentiality. Since many forms or schedules used for routine reports are filled out during an interview, the items must be so worded that there will be no danger of ambiguity or misunderstanding on the part of the interviewer or the respondent. Every consideration should be given to the clarity of words and phrases used, especially when language difficulties and semantic differences are involved.

205. Instructions for entering and processing the information must be clearly understood so that errors will be avoided and the tabulated results will be comparable. Report forms should be designed only after the content of reports has been outlined, the unit of count determined, and a decision reached on the method of entering and tabulating the data. Since proposed report forms almost invariably require modification, each form should be carefully reviewed by the persons who will use the data and should be mimeographed and tested by actual use for an adequate trial period before it is finally adopted and printed (pars. 116–126).

206. Figure 18 illustrates a worksheet for a report form being tested in the demonstration project described in chapter VIII. It is used by physicians and nurses to enter data obtained during home visits. For that reason it was designed for ease in entering data during the visit or in a streetcar or automobile. If the form proves satisfactory after several months' trial, it may be printed on a punch card. Figure 19, developed in the same demonstration project, includes the same data as figure 18, but is designed for use in clinics and conferences. This form includes space for as many as 15 individuals. In both instances data are transferred to punch cards as soon as the report forms are received in the office of records and reports. The numbers in parentheses or boxes refer to the punch card columns. In figure 18 other numbers refer to the code for the columns. These few numbers were inserted for use during the trial period. Figure 18 is presented as received in the office of records and reports; figure 19 includes entries made by clerical staff in editing and coding data.

Instructing Personnel

207. All personnel, from the director of the health department to the messenger, should understand the value of accurate and complete reports, the importance of each report form, and the responsibility of each staff member in the system. Necessary instructions and definitions should, if possible, be printed on the form. When space is at a premium, however, the instructions may be printed on an accompanying page or included in a manual on procedures. Trial periods by the members of the staff who are to use the form pay dividends. A trial of at least a week will not only serve for in-service training for the personnel who are to use the form but will also indicate any need for clarification of terminology and instructions. Flow of work and in-service training are discussed in paragraphs 211–214 and 226–227.

Chapter VII

Office of Records and Reports

208. Directors of health departments are becoming more and more aware of the need for advance planning to develop standards and procedures for record and report systems. Many administrators have appointed a record committee and have designated one person to be in charge of the office of records and reports. These two steps are essential for the proper administration of records and reports.

Record Committee

209. The appointment of a record committee consisting of staff personnel to act as advisers to the supervisor of the office of records and reports is a basic step in planning a record and report system. In a large department, it is advisable to have the membership of the committee include representatives of the division directors, the administrative, medical, and nursing staff, the statistician, and the supervisor of the office of records and reports. A committee with no less than 5 and no more than 10 members achieves the best results. Its responsibilities may include a study of the need for existing records and reports, decisions as to the specific data to be recorded for service records and for evaluation, definition of terms, approval of all forms to be used, and periodic review of the forms in current use. In a small department, the health director, chief nurse, chief sanitarian, and record clerk should assume the responsibilities of this committee. The basic principles and responsibilities are the same, regardless of size of department.

Supervisor's Functions

210. The appointment of one person as supervisor of the office of records and reports, with responsibility for the organization and management of the office, is essential for the development of a smoothly functioning record system that will provide adequate service to the director of the health department, the division directors, and the community. In a small department, the secretary to the health director or the record clerk is usually the supervisor of records and reports. The functions of the supervisor include the development of procedures for preparing records and reports and for processing them within the office; for making records available to professional personnel; for the use of confidential information; and for supervising and training all record clerks and allied personnel in the health department.

Procedures

211. *Flow of work.* A primary function of the supervisor is to plan the work of his office. It is essential that he fully understand the end results to be achieved so that he can outline each step of the work to be performed and can establish the most effective procedures for performance. He must be able to arrange the appropriate sequence of work for each of his subordinates. He must know his staff and the workload that each can carry. He must stimulate a spirit of cooperation within the office and between the office and each other division of the health department. Weeks (*27*) and Leffingwell and Robinson (*13*) give helpful guides for charting the flow of work. Each step should be planned in relation to other steps in accordance with the training and experience of the employees who are to do the work.

212. The routine established should permit an orderly and rapid flow of work from one desk to the next. Processing the active records and filing them within a few hours after receipt will insure the availability of these records for the next request for information. When the supervisor finds that each day starts

with a backlog, an examination of activities is in order. Adding another clerk is not always the answer. With good work habits, adequate knowledge of filing methods, effective work incentives, and clearly defined standards for guidance, the most frequent causes of delay in completing the work assigned will disappear. Bottlenecks caused by having work held too long at one desk or in one office should be investigated. Too frequently, a file clerk is blamed for failure to find records that have not reached the file or that have been incorrectly labeled. Instructions for the preparation and flow of records within each division should be issued and enforced. The coordination of work with other divisions and units to obtain continuous flow of records and reports to and from the record office is essential to the smooth functioning of office routine. Messenger service or a conveyer system is needed for the transportation of records from one office to another. In small health departments a file clerk can deliver the records to the clinics in the morning and collect them at the end of the clinic session.

213. Another bottleneck can frequently be traced to attempts to process each record in the order received. When a few records require extra review or verification, it is wise to put them aside so that other records can be processed promptly and sent on to the next person concerned. Thereafter, time may be given to the records that require additional work.

214. Many supervisors like to have a daily summary of each employee's work output. This summary need not include all details of the day's work; it can be of value if it gives merely highlights.

215. *Procedure manual.* A manual of procedures is of value in any office, no matter how small. An outline of the record system listing the daily routine, regulations for the use of records, location of records and files, and procedures in compiling reports is not only a useful tool for training but also an essential guide for anyone who must substitute for an absent employee in the record office. In a larger office, the manual is invaluable to the supervisor as an administrative aid, since it outlines the flow of work within a department and the assignment of duties to the personnel.

216. Listing of procedures in detail should be avoided since routines within an office may change frequently. Keeping a detailed procedure book up to date becomes a time-consuming chore. If the details for any specific job are considered necessary, it is preferable to list procedures on cards or in a looseleaf folder rather than in bound volumes in order to facilitate additions, deletions, or corrections. A useful supplement to the procedure manual is an atlas or directory of all forms approved for printing with a sample of each form (par. 126).

217. *Release of confidential information.* By long-established tradition the personal relationship between the physician and the patient has been one of trust and confidence and is fundamental to the provision of the highest quality of care. The Bureau of Medical Economics of the American Medical Association has noted the following with reference to the oath of Hippocrates:[1]

> Honorable conduct is joined with the pledge of secrecy, "Whatever . . . I may see or hear in the lives of men which ought not be spoken abroad, I will not divulge, as reckoning that all such should be kept secret." This comprehensive and insistent emphasis on the necessity of honorable, personal and completely confidential relations between physician and patient as the first essential of correct diagnosis and proper treatment has ever since been the basis of good medical practice, and it has been the task of the medical profession to maintain this essential basis of medical practice against all assaults.

218. There is thus a vital general relationship between confidentiality and the provision of high quality of medical care. Correct diagnosis and, thus, the efficacy of all care and treatment depend in substantial measure on the completeness and reliability of information about the individual's history and his present condition. Long experience has indicated that unless protection can be assured, the information will tend to be incomplete and less reliable, and persons needing service from a health agency will be deterred in some measure from seeking such services. Since ready access to preventive, diagnostic, and therapeutic services contributes not only to individual health but to the good of the community, lack of confidentiality in this relationship would in some measure defer pursuit

[1] *American Medical Association Bulletin*, vol. 31, p. 94, May 1936.

of these services, with consequent harm to the community.

219. Confidentiality in the physician-patient relationship is accordingly essential in accomplishing the objectives of the local health department. Therefore, it is necessary to protect this information from disclosure for other than health and medical needs unless the individual himself agrees to the release of the information. In addition, the local health department has a special responsibility arising from its more general responsibility for the community's health and the fact that, besides providing programs for health care, the local department is engaged in the administration of programs dealing with the detection, control, and eradication of disease, usually of the communicable or contagious variety. The extent to which disclosure of communicable diseases is required will be determined by the local law.

220. Many States, by statute or other law, specify that information acquired by a doctor or nurse for the purpose of diagnosis or treatment is confidential and may not be released for other purposes without the individual's consent. Separate statutory provisions may control the release of special types of information such as that relating to venereal disease or vital statistics. In addition, health departments may have authority to adopt regulations having the effect of law that will give protection to information on records where such protection is considered essential either because of the ethical principles of the medical and nursing professions or by the objectives of the health program. Finally, policy rules to be adopted by the record committee for staff guidance in situations not covered by law or regulation are usually advisable to assure consistent treatment of requests for services. The supervisor of the office of records and reports should be familiar with the laws and regulations of the State and locality governing release of information from the records of that office and must be able to differentiate between an authorized and an unauthorized release of information.

221. Every employee in the health organization is responsible for safeguarding confidential information. It is recommended that a statement of the controlling law, regulations, and rules be formulated and furnished to all personnel. Such a statement will not only standardize procedures but will serve to impress the employees with the importance of the confidential nature of records. In addition, the statement protects employees against unreasonable requests. The formulation of a statement of the controlling rules for the protection of service records should be a function of the record committee. Since the statement encompasses the law and legal regulations within the framework of which each health department must operate, the outline should be prepared in consultation with the department's legal adviser. The legal adviser should also be consulted in the preparation of any forms for use in requesting or authorizing the release of information.

222. *Retention of records.* Health department records are the basis of many research projects designed to evaluate, by review of a large number of cases, the efficacy of the program and to detect factors having new or potential significance. The local health department therefore has a special concern for the safekeeping and protection of its significant records from loss or abuse and in making them available for future reference by the public or others entitled to the information under rules or regulations. To meet both the needs of such persons and of the health department, protective provisions should be directed to the original records, with provision made to permit their examination or reproduction when the disclosure involved in such process is properly authorized.

223. Two primary factors in determining the length of time to keep records for such purposes are the law and usage. Since the statutes vary among States, the legal adviser for the health department should be consulted as to the type of records that should be retained and the length of time they should be kept. It is important to bear in mind, for example, that many of the persons receiving services from the department are minors and that upon reaching majority they may be in a position to take legal actions directly involving records that would not be available if only the minimum period of retention specified by statute had been observed.

224. Usage is the second consideration in determining the length of time to keep records. A record should not be destroyed if it is likely

to be needed. That need can be determined by noting all requests for nonactive records. The frequency of these requests and consideration of legal requirements will assist in determining the length of time records should be kept. Weeks (*27*) discusses many factors to be considered in the transfer or disposition of records.

Personnel

225. *Selection.* The quality, morale, and attitudes of personnel in the department are of primary concern in office management. The best procedures will be ineffective if employees are not interested in their work or have little incentive to do a good job. Employees, when selected, should be chosen to meet the requirements of the position that is open. In transferring employees every consideration should be given to selecting the right person for the job. Some persons, because of training, experience, and personal attitudes, are more suited than others to routine work. Others are bored by routine duties, and are likely to make mistakes in routine tasks. Many advantages accrue when it is possible to promote an employee within the office or department. The incentives and satisfactions characteristic of an employee whose effort is rewarded by an advancement are reflected in an increased quantity and quality of production.

226. *Training.* Almost every job requires some training, whether it be answering the telephone, filing, or editing data for accuracy and completeness. The advantages of training are many. The employee becomes adjusted to the work more quickly; his work is more accurate; and he is more likely to use standard methods and procedures. If adequately trained, the clerk will develop more rapidly and be better prepared for an advanced position. He will be interested in his work and willing to cooperate with his supervisor and co-workers. Interest and cooperation are essential for good results on the job.

227. Inservice training for the clerical staff is a responsibility of the supervisor. This training should include an orientation period in the health department. The orientation will give the trainee a better understanding of his position and a more intelligent background for performing his responsibilities if the training includes: (1) explanation of the functions of local, State, and Federal health agencies; (2) description of the role of each service division as well as of the voluntary agencies, their objectives, responsibilities, problems, and accomplishments; (3) account of the existing and prospective programs of the department; (4) discussion of public relations and the importance of maintaining good relations between the health department and the citizens of the community as well as with voluntary agencies; (5) review of the use and importance of records and reports in each division; (6) explanation of the purpose of each form and worksheet; (7) sketch of the flow of records and reports showing how each form for the record and each worksheet for the report is completed; (8) explanation of the importance of the trainee's job in the health organization and how the job fits into the pattern of positions for the department; and (9) discussion of confidential information and the trainee's part in helping the health department to maintain its trust to the individuals whom it serves.

Location of Office

228. *Importance of location.* No matter how adequate the clerical assistance, professional staff, and equipment of a health department, a coordinated service to the community will be improbable if the record office is unsuitably located and cramped for space. The most advantageous location is immediately off the lobby, where the records are accessible to members of the staff and to individuals who are registering for clinic care or seeking reports on previous treatment. A central or convenient location is essential for efficient service to the professional staff unless an adequate conveyor system—messenger or mechanical facility (tube or belt system)—is available. An example of better use of existing facilities in one health center is illustrated in the discussion of the demonstration projects presented in appendix A, cases III and IV. In the construction of a new health department careful attention should be given to the optimum location for this office.

229. *Lighting and ventilation.* Proper lighting and sufficient ventilation must be considered in determining the location of the record office. Information on lighting and ventilation has

been published by the Illuminating Engineering Society (*12*) and the American Society of Heating and Ventilating Engineers (*3*).

230. *Storeroom.* Provision for future storage should be considered at the time of organization or reorganization of the record office. Health departments that are giving service to individuals with chronic disease will find that the records of such patients are seldom "closed" or "inactive." Many records that have been closed will be reopened when the individual returns for further service, necessitating frequent trips to the storeroom for records of discharged individuals. It is essential that the storeroom be in a location that is readily accessible at all times and adequately lighted and ventilated. The best arrangement is to have this room as close as possible to the record office. It should be kept at an even, moderate temperature, free from dust and moisture, and without overhead steam or water pipes that may leak and destroy the records. The equipment can be very simple. The type of files to be used will depend on the type of records and their use. Records in folders can be filed to advantage in upright library stacks of steel or wood having supports every 2 feet or less. Records not in folders can be filed in transfer cases or inexpensive cardboard or metal files.

231. *Transfer of records.* Two methods of transferring records to the storeroom are suitable. The first method is periodic: Whenever space is needed in the record office for current records the oldest records are transferred to the storage space. This method presupposes a numerical system of filing; the lowest numbers are automatically transferred monthly, quarterly, or annually. The second method is the constant method: All closed records are transferred to the storeroom. The same filing method, numerical or alphabetic, can be used in the storeroom, or the records may be filed by year of discharge. This method is advantageous when transfer cases or storage boxes are used, but, when records are filed by year, the year of discharge must be recorded on the index card or on the card inserted in the location of the removed record in the files in the record office.

Coordination of Services

232. The supervisor of the office of records and reports, acquainted with the objectives and functions of the department and of each program, is in an excellent position to assist the health director in integrating and coordinating many services which otherwise might be developed singly. Examples of coordination of services among health units are presented in appendix A, case VI.

233. Many supervisors take the initiative in the development of a reference library and promote the combined use of records, reports, and available literature through the proximity of the library to the record office. Procedures for organizing a reference library are presented by Huffman (*11*). The use of current literature can be encouraged by frequent reviews of recent publications and by the bibliographies prepared from this source material for staff members who are working on special research projects.

Chapter VIII

Application of Principles in a Demonstration Project

234. One of the demonstration projects conducted by the Public Health Service afforded an opportunity to develop and apply the principles and methods cited in the foregoing pages. A city health department serving a population of over 500,000 had undergone a comprehensive survey at the request of its mayor and with the endorsement of the director of the State health department. The comprehensive survey and recommendations—covering all functions of the public health department in the city—stressed the need for a well-organized, well-integrated system of records and reports which would provide the data necessary to evaluate the effectiveness of existing services and to plan for improving general health levels. The recommendations pointed out, for each of the health department's programs, the importance of records as a means of ascertaining health needs and other socioeconomic factors in various areas of the city. Reports, based on these data, were cited as essential tools in analyzing problems in each program, evaluating the achievements of personnel, determining costs, and providing material for public information and health education.

235. Since the survey recommended a rather thorough reorganization of the health department itself, it was necessary to set up a record and report system that could function adequately during the transition from a centralized health department to an organization decentralized into a number of relatively autonomous health centers. The demonstration project omitted consideration of sanitation records, venereal disease control program records, and vital records (birth and death certificates). Except for these exclusions it provides a practical guide for the application and adaptation of principles and techniques to the organization of centrally controlled, centralized, and decentralized systems of maintaining records and reports in a local health department responsible for a wide range of services to a large community.

Initiating the Project

Interviews With Staff

236. The director of the health department, division directors, supervisors, administrative personnel, other employees, and representatives of the Public Health Service were interviewed to determine the program objectives, the content and use of existing records and reports, and current methods and procedures used in recording data and compiling reports.

Record Committee

237. A record committee, appointed by the director of the health department, included all division directors and selected personnel, and consultants from a school of public health located in the State. At its first meeting the record committee stressed the need for uniform definitions and standards among divisions, basic data on age groupings of individuals who received service, the areas of the city that were represented by the population receiving service, and the use of consultation service available at health conferences and clinics. After only a few committee meetings the value of the group sessions was evident. The major benefits noted were: participation of all members in the development of the demonstration project; promotion of a feeling of cooperation and team spirit; and attainment of a composite opinion through discussions of members having common problems.

238. The record committee meetings also provided a means of outlining objectives of current and prospective programs. These objectives revealed the information that would

have to be collected to assure maximum usefulness of records and reports and were guides in determining the basic filing system, method of recording, flow of work, and types of reports to be prepared. The record committee continued to meet frequently during the demonstration project to review the progress and to recommend revisions of procedures. These sessions developed into well-planned and effective monthly staff meetings.

Objectives and Methods

239. The broad objectives outlined by members of the record committee for four of the programs were as follows:

INFANT AND PRESCHOOL

General objective: Raising the general health status of infants and preschool children.

Specific objectives: Preventing the spread of communicable disease; providing for normal physical, mental, and emotional development; detecting physical defects at onset and early referral for correction; and developing a health education service.

Methods: Clinic services, preventive services, health guidance.

ACUTE COMMUNICABLE DISEASE

Objective: Controlling incidence and preventing complications and death.

Methods: Sanitation, immunization, quarantine, isolation, determination of source of infection, carrier control, rehabilitation.

Techniques: Health education service.

TUBERCULOSIS CONTROL

Objectives: Finding, isolating, treating, rehabilitating patients; preventing others from contracting the disease through immunization and education of the community (individuals and groups).

Methods: Case finding (survey technique, followup of contacts and of known and suspected cases); case holding (hospital treatment, home, and clinic); rehabilitation.

SCHOOL HEALTH

Objective: Promoting optimum health for the school population.

Methods: Guiding pupils, parents, and teachers in maintaining good health among children, recognizing and remedying defects, and adjusting to noncorrectible defects.

Data for Evaluation of Services

240. When the objectives were determined, the record committee selected the specific data in each program that would be pertinent to the evaluation of health department activities, using an evaluation schedule (2) as a guide. Data suggested as necessary for evaluation of the child health conference, one section of the infant and preschool program, were:

a. Number and types of complete immunizations.

b. Number of children attending the conference, to determine what percentage of the infant population was being served.

c. Percentage of the child population immunized.

d. Area of city represented, to determine whether the conferences served the infants from the geographic area of greatest need.

e. Attendance at conferences to determine the average number of visits per child during a given period, the number of families represented by the attendance at the conference, and whether other members of the family received services from the health department.

f. Source of referral, to determine whether the referral was from within the department and from what service or from outside the department (other agencies, dispensaries, private physicians).

g. Amount of consultation service, to determine whether a sufficient number of consultants were available at the conference, whether some available services were not used and the average number of consultations (by type) per child within and outside the conference.

h. Percentage of congenital abnormalities and other handicaps (visual, auditory, heart) diagnosed for the first time during the conference.

241. Data requested by the administrative staff for evaluation of personnel included the types of service categories represented in home visits, the average number of visits to individuals, the number of clinics and conferences attended, number of consultations requested, number and type of activities performed, and type of disposition or referral of individuals served.

242. The committee then discussed the value of the data suggested, evaluating each of the items as to its importance, availability, accuracy, and usefulness.

Many of the suggested items did not pass the test and were dropped or tabled for later discussion. Those accepted were again tested by determining the related information which would be essential in analyzing the significance of the findings. Examples of this scrutiny of data suggested for the child health conference were:

243. Number of completed immunizations: Knowledge of the number of completed immunizations is important in the study of the

program, but data on the age level at which the immunizations were completed would provide a more valuable index in the evaluation of the program.

244. Number of children attending conference: The actual number of children attending the conference is a useful figure, but additional items which would provide a valuable key in evaluations would be the number of new admissions and the number of readmissions in each age grouping, showing the total number of visits and the areas of the community represented.

Unit of Count

245. Advantages and disadvantages in the use of the four units of count most frequently employed in analysis of data of health organizations were discussed to decide which would be most valuable in the analysis of data under discussion. These four units and their definitions are:

246. *Activity.* The item of service furnished to an individual (visit, X-ray, immunization); to an establishment (visit, inspection, installation).

247. *Case.* A condition for which an individual receives service. The service category (tuberculosis, maternity, infant, and preschool) determines the case. An individual is considered a separate case for each service category for which he receives service. In addition, a time interval may be involved, for example, the calendar year, as the case count is frequently made for a year's period. An individual with two admissions to the maternity service during a year is counted as two cases. A child discharged from the infant service and admitted to the preschool service during the same year is counted as two cases. The number of conditions rather than the number of individuals determines this unit of count.

248. *Individual.* A person who is under or receiving guidance by a staff member, regardless of the number of visits or services.

249. *Family.* A group of persons who are members of the immediate family (father, mother, children); individuals related by blood or marriage; adopted children and children at board living in the same household of which one or more than one member receives service by staff personnel of the health department.

250. Consideration was given to the cost of records and reports for each unit of analysis. The committee unanimously decided that analysis based on the individual served was essential for proper evaluation of present and proposed programs of the department of public health. This unit would provide the analysis requested by the record committee—number of individuals served by the department and by each program, age groupings and residence, the source of referral, disposition, and average number of visits. Since only the number of families served and the number of individuals within a family who received service were requested for the family unit of count, these data were to be supplied by instituting a numbering system which, in addition to identifying the individual, would also identify the family (pars. 132–139).

Periodicity of Tabulation

251. The record committee requested that all the data selected for analysis of programs be included in the first monthly report of the next new calendar year. At the meeting for the review of this report the procedure for the next 2 months was established. Seven of the ten summary tables which had been presented were requested on a monthly basis; two were needed quarterly; and one, semiannually. Plans were made to review the tables and the periodicity of tabulation of each at the end of the first quarter. It was anticipated that quarterly reports could be substituted for many of the monthly reports, and that many quarterly reports could become semiannual or annual tabulations. The request for the reports at more frequent intervals during the first 3 months of the demonstration was attributed to a need for the data to be used to evaluate the progress of the programs, to obtain basic information for planning the decentralization of health department activities, and to give prompt evidence of the information which was available.

Record Unit

252. The family unit record was selected by the committee as the method to be used to coordinate all the data recorded for the individual and also to provide immediate access to the service records of other members of his family.

253. The family unit record is to be kept in a folder (9 by 11¾ inches) which will contain:

1. A medical or health record for each individual receiving service by a doctor on the staff of the department of public health. This record would contain pertinent health data (preventive and therapeutic) noted by the doctor and nurse during field, home, office, clinic, and conference visits.

2. The family record, consisting of the nurses' notes on social, economic, and health data pertinent to the family as a whole. In this record entries will be made chronologically by date for each member of the family receiving service.

Review of Records and Reports

254. The existing records, reports, and data required by Federal, State, and local agencies were reviewed by the committee in order to analyze the source of the data, the use of both the records and the reports, the methods of compilation, and the cost in terms of time and personnel. The records and reports proposed for discontinuance were subjected to final review by the committee. The reports required for other agencies (local, State, and Federal) were also studied; representatives of these agencies were asked for opinions on the data necessary for their programs.

Installing the Record and Report Systems

255. The record and report systems developed during the demonstration project were focused on the organization of procedures which would serve the staff and the community before and after development of the new health centers, giving maximum efficiency at minimum cost at all times. The basic system planned for immediate use was the centralized system with central control, with gradual transfer to the decentralized system with central control to be made as the health centers were established.

Centralized System With Central Control

256. A system providing for the centralization of records and reports in one office was installed in the health department in January. Early in the year the existing nursing records were transferred to the office of records and reports and a family unit record was started. Whenever a record is requested from the files, the available records on the individual and the family are combined to form a family unit record. The same procedure is followed for records for child health conferences, making provision for transporting records to and from the main health department. All conference and clinic records will be centralized as soon as transportation facilities are available and as soon as an appointment system can operate efficiently. After the health centers are established in accordance with the survey plan, records will be kept by each center, but the record and report system will remain under central control.

Basic Procedures Adopted

257. Three essential needs were met in the organization of basic procedures for records and reports: (1) central responsibility and authority over personnel handling records and reports and for procedures affecting the recording of data at the source; the processing of material, the flow of work, filing methods and procedures, tabulations, and analysis; the releasing of data; and the supervision and training of clerical personnel in the record offices and in other offices of the organization; (2) location of records within each health center at a focal point for service to each division; and (3) identification of individuals and families promptly through a numbering system and index.

258. *Numbering system.* A numbering procedure was instituted for identification of the individual and the family, and as an aid in filing and in statistical analysis.

259. Each family, on receipt of the first service, gets a five-digit number. Each individual in the family receiving service from the health department gets a six-digit number, of which the first five digits represent the number assigned to his family.

260. *Number book.* A number book was installed in the office of records and reports as an aid in the assignment of family numbers. Assignment of the individual number is made from the family index described below.

261. *Family unit record.* The type of record arrangement instituted was the family unit rec-

ord illustrated in figure 5. Each folder contains all data on one family. Within the folder the medical records for each member of the family are attached to backers, and the socio-economic data for the family (family roster and social data and family progress notes) are attached to another backer. All records for all members of the family are filed in the family unit folder. The staff nurses may request the folders for review before making home visits. The backer containing the family roster and progress notes is removed for use during the home visit. As soon as health centers are established the medical records will remain in the health center. They will be available for use during the clinic and conference sessions and for review by the doctor or nurse in the center, but will not be removed for home visits.

262. *Folders, backers, and fasteners.* One folder is inserted in the file for each family, with the number and family name appearing on the tab. The record forms for each individual are attached to a backer by a fastener. The family roster and social data and progress notes are also attached to a backer which is scored for folding at the center. The folding of the backer enables the nurse to insert the record in her bag when making home visits.

263. *Filing method.* Numerical filing was selected for records. It was considered advantageous because, in addition to being fast and accurate, it is an aid in identification. The five-digit number assigned to each family appears on the folder and on the family roster and social data and progress notes. The family unit folders are filed in numerical order. Within each folder the individual records are arranged in numerical order according to the sixth digit. Since it was determined that the name of the head of the family appears on the request for records or for data on any individual member of the family, a single index (family name card) was installed.

264. *Index.* Two types of name cards (family and individual) were designed for use by the department and were set up as service records. They contain the minimum of data needed to identify the individual (name, address, birth date, sex, race, father's name, and the unit number).

Family Name Card

265. Family name cards (fig. 9) are filed alphabetically and form the family index or central index. This file reveals whether any member of the family has ever before received services from the health department and indicates the exact location of this record. The family index will be the only index in use until the district health centers are developed.

Master (Individual) Name Card

266. A card (fig. 10) to supplement the family index, which will remain in the central office, was designed for use in each health center as a master index and will aid in the identification of individuals and in the location of records.

Filing Method

267. A perpetual file for the index cards was preferred to an annual file, to avoid the need to look in more than one place for an index card. In the family index family names were arranged alphabetically. Before the demonstration project was completed, it was decided to use a phonetic arrangement in filing the cards in this index. The phonetic arrangement will be adopted in each health center as soon as the master index is started.

Cross-Reference

268. Procedures for the use of cross-reference cards, of value in referring from one part of the index to another, were outlined and installed. Names spelled two or more ways, or two or more names of one person were cross-referenced.

269. *Forms.* Record forms were designed by the medical directors and nursing representatives on the record committee. Methods employed in designing the forms were the same as those employed in organizing the record and report systems. The data to be recorded on each form, the wording, and the spacing were determined after review of the objectives of the program, the use to be made of the record, and selection of the method of recording.

270. Forms for the child health conference record (figs. 20–22), family roster and social data (figs. 23–26), and family progress notes (fig. 27) were designed, tried out, and redesigned after trial. Mimeographed forms were used for the first version and a multilith process for the second and third. The forms were then printed. Plans were made to review the forms before each reprinting in order to add additional material pertinent to the program and eliminate the items which were not being used.

Central Index Exchange Record

271. The central index exchange record for the family index (fig. 11) was prepared for the interchange of minimum identifying data between each district health center and the main health department. The form is to be completed on the first admission of the individual to a health center. At the close of each

CHILD HEALTH CONFERENCE RECORD

NAME *(Last name first)* | DATE ADM. | NUMBER

BIRTHDATE | SEX ☐ M ☐ F | RACE ☐ W ☐ N OTHER _____ | CHILD REFERRED BY

PLACE OF BIRTH *(Home or name of Hospital)* | ADDRESS

NAME OF CHILD'S M.D. OR OPD | ADDRESS | PHONE NO.

FAMILY HISTORY NUMBER OF CHILDREN LIVING _____ DEAD _____ MISCARRIAGES _____ STILLBIRTHS _____

(Note illness of family significance; include births and deaths. KEEP CURRENT - Date each entry.

HISTORY OF THIS PREGNANCY

CHILD'S HISTORY | BIRTH WEIGHT

Neonatal _____

FEEDING HISTORY

Number of months on breast _____. Bottle: (age in months) Begun _____. Discontinued _____.

Month begun: Vit. Sup. _____. Solid foods (cereals, etc.) _____.

CHILD'S DAY

FACTORS INFLUENCING CHILD'S PROGRESS *(Keep current)*

ILLNESS *(Note age of occurrence, unusual features, hospitalization, etc. KEEP CURRENT)*

Chicken pox _____
Diphtheria _____
German Measles _____
Measles _____
Whooping Cough _____
Strep. Inf. - with rash _____
without rash _____
Tonsilitis _____
Mumps _____

Allergy _____
Colds (freq.) _____
Otitis _____
Pneumonia _____
Rheum. Fever _____
Operations _____
Injuries _____
Other _____

DEPARTMENT OF PUBLIC HEALTH

Figure 20. Child health conference record (p. 1).

GROWTH AND DEVELOPMENT — MONTH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	COMMENTS
Repeat Syllables																
Walk alone																
Stand alone																
Walk help																
Pull to stand																
Prehension																
Crawl																
Sit																
Roll																
Hand																
Head																
Vocal																
Smile																

YEARLY SUMMARY BY JOINT STAFF

1 Year of age	
2 Years of age	
3 Years of age	
4 Years of age	
5 Years of age	

IMMUNIZATIONS - TEST (History and current)

IMMUNI.	DATE	PROD.	DOSE	BY	DATE	PROD.	DOSE	BY	DATE	PROD.	DOSE	BY
Diph.												
Pert.												
Tet.												
D.P.T.												
Bstr.												
Typhoid												
Bstr.												

TEST-IMMUNI.	DATE GIVEN	PROD.	DOSE	BY	DATE READ	RESULT	READ BY	COMMENTS:
Tuberculin								
Schick								
Smallpox								

Page 2

Figure 21. Child health conference record (p. 2).

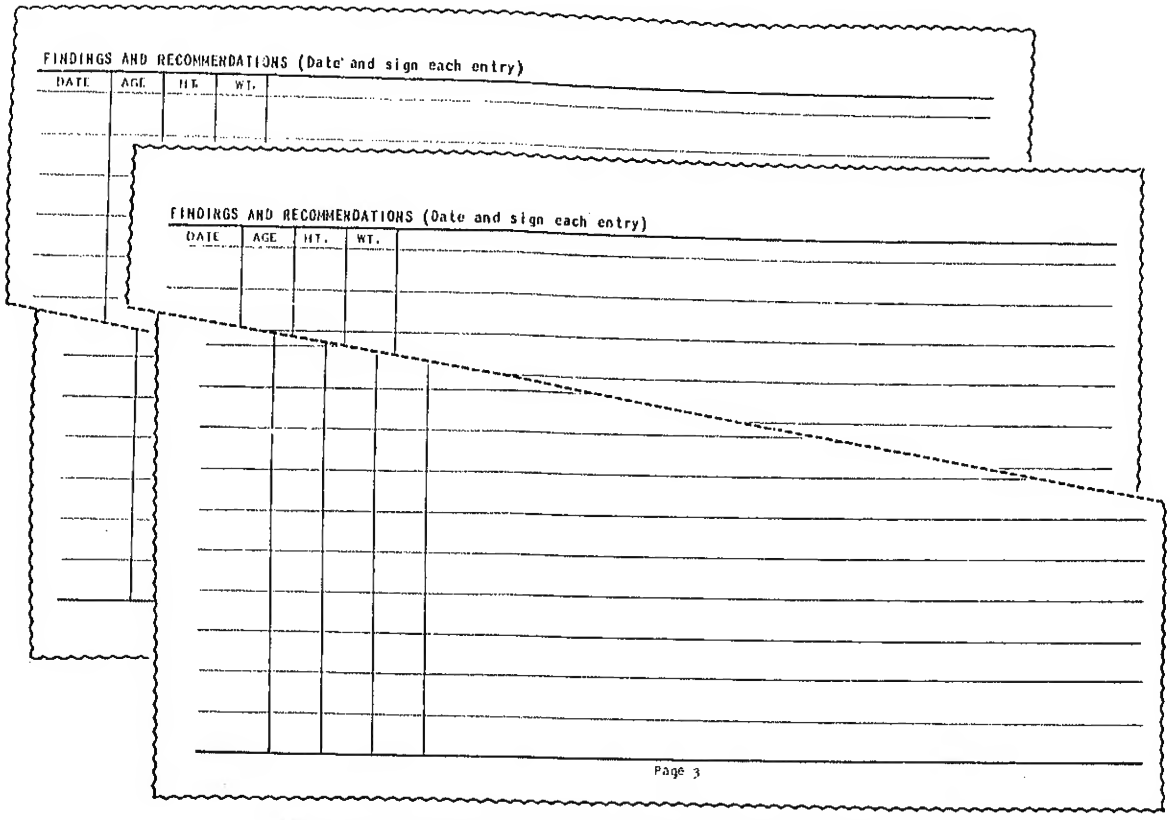


Figure 22. Child health conference record (pp. 3 and 4).

day the completed forms are to be sent to the office of records and reports in the main health department. In this office the family index will be searched to determine if the individual has had a previous admission to one or more of the units in the health organization. When a record of previous admission of the individual or member of the family is located, the unit number will be recorded in the space provided, together with the name of the health center. The form will then be returned to the center from which it was received.

Out Card

272. Out cards (fig. 15) were printed for filing aids. An out card is completed as a request for a record; it is placed in the file each time a record is removed; and, in turn, is removed when the record is replaced. This card contains space for the record number, date, name of individual, and name of person withdrawing the record. The out card, printed on cardstock, measures 8 by 10 inches; it extends one-half inch above the records in the file. This card aids the clerk in searching for the record since it indicates to whom the record was loaned; when the record is refiled the card indicates the proper position of the record.

Tickler Card

273. Tickler cards (fig. 6) were designed, printed, and issued to the staff in the division of public health nursing. Each nurse established a file for followup of her home visits. A card is completed for each individual for whom a home visit is scheduled. Guides are set up for each calendar day and the individual cards are filed back of the date of the next visit. Minimum data, such as name, address, birth date, service category, and unit number, are filled in as an aid in identification. In addition to its function as an aid in followup, the tickler file is a guide in scheduling visits. The cards are also a ready reference for filling in out cards when requesting records from the record office.

Appointment Forms

274. Forms (8½ by 11 inches) were mimeographed to aid in scheduling appointments at the child health conference. The data listed include the name, sex, and age of the child, unit number, and an indication as to whether the case is new or old to the health department. An appointment form is completed for each conference session, serving as a guide in scheduling visits and in preparing the out cards used in requesting records from the office of records and reports.

Authorization Forms

275. A form was designed and mimeographed for the health department as an aid in requesting data from other agencies and for releasing data to individuals, institutions, or agencies outside the department. Staff nurses who need to study an individual's

252060—53 ——5

FAMILY ROSTER AND SOCIAL DATA

(ITEMS I, II AND III SHOULD BE COMPLETED ON FIRST CONTACT—OTHER DATA TO BE ENTERED AS SOON AS IT IS OBTAINED)

I. FAMILY NAME | RACE ☐ W ☐ N OTHER_____ | NUMBER

RESIDENCE (HEAD OF FAMILY) YRS. IN [redacted] YRS. IN [redacted] | RELIGION M_____ W_____ | REFERRED BY

II. CURRENT ADDRESS AND CHANGES

DATE	ADDRESS	C.T.	PHONE NUMBER	TYPE OF HOUSE	NO. OF ROOMS	MONTHLY RENT	SIGNIFICANT NOTES ON HOUSING

III. FAMILY ROSTER

NAME	SEX	BIRTHDATE	RELATION TO HEAD	SCHOOL (USE PENCIL)	CHANGE IN HOUSEHOLD (USE PENCIL, DATE & KEEP CURRENT)
MAN	X				
WOMAN (FIRST AND MAIDEN NAME)	X				
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
OTHERS IN HOUSEHOLD:					

NEAREST RELATIVE OR FRIEND:

NAME | RELATIONSHIP | PHONE NUMBER

ADDRESS

IV. FAMILY M. D. (USE PENCIL, DATE & KEEP CURRENT)

NAME | PHONE NUMBER

ADDRESS

DEPARTMENT OF PUBLIC HEALTH

Figure 23. Family roster and social data record (p. 1).

V. SOCIAL SERVICE EXCHANGE

REGISTERED (DATES)

AGENCY CONTACTED	TELEPHONE	DATE ADMITTED	CASE NO.	NAME OF AGENCY WORKER (KEEP CURRENT—USE PENCIL)	DATE DISCHARGED

VI. EMPLOYMENT HISTORY

NAME	OCCUPATION	INDUSTRY	EMPLOYER	DATES FROM	DATES TO	MONTHLY EARNINGS

VII. OTHER SOURCES OF FAMILY INCOME (BE SPECIFIC)

DATE

VIII. SUMMARY OF SERVICES GIVEN:

NAME	SERVICE	DATE OF ADM.	DATE OF DISCH.	NAME	SERVICE	DATE OF ADM.	DATE OF DISCH.

Figure 24. Family roster and social data record (p. 2).

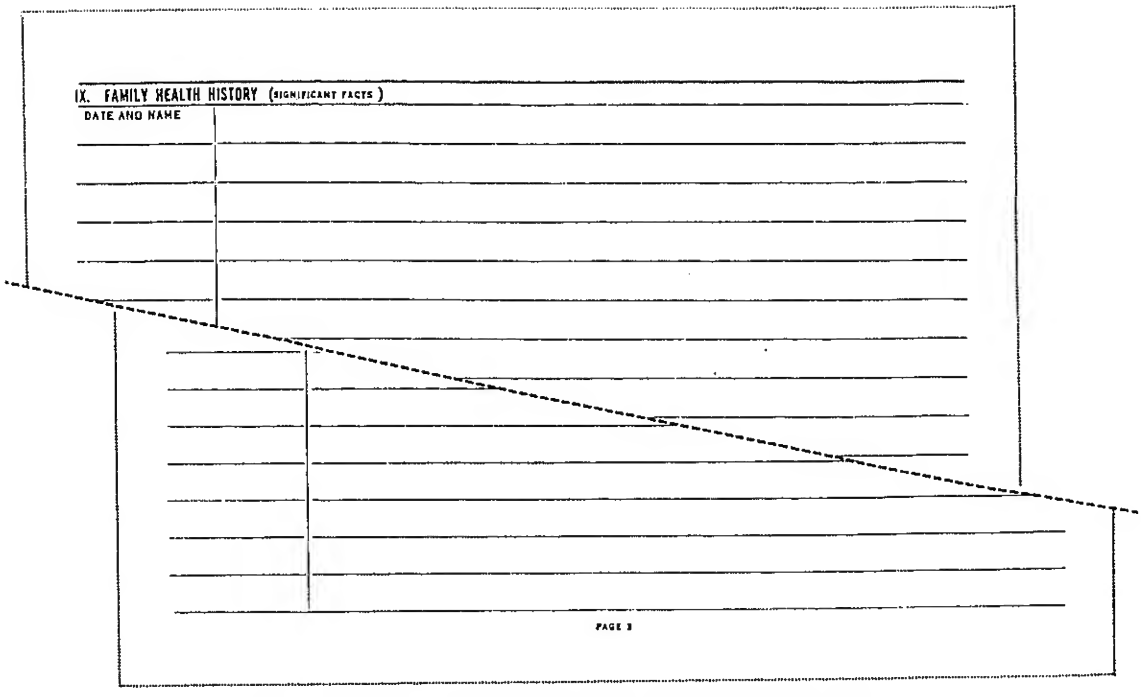


Figure 25. Family roster and social data record (p. 3).

hospital record obtain his signature on this form and present it at the hospital record office. A request for abstracts of medical or nursing data from other institutions is accompanied by this form. Insurance companies and legal representatives seeking information from health department records are asked for proper authorization before the confidential data are released. The form is filed in the individual's record with a copy of the material released.

Referral Record

276. A referral record (fig. 7) was designed and mimeographed for interagency and interdepartmental use in referring individuals for service, examination, or treatment. This form lists the standard data necessary for reference and identification by the agency or individual to whom the request is addressed. The use of the reverse side for the reply eliminates the necessity of repeating the identification data on a returning letter or form.

Daily Work Records

277. Daily work records were designed to be used as source material for the type of reports that the division directors required. The form also serves in training personnel to record information. A daily record (fig. 18) was developed for use by physicians and nurses in home visits. A daily register (fig. 19) was similarly set up for use in clinics and conferences. Two additional forms, one for reporting nursing activity in schools (fig. 28) and the other for reporting group activity (fig. 29) were adopted for use of staff nurses as an aid in supervision.

Selecting and Tabulating Minimum Data

278. The following items were selected as minimum data for the routine reports of the department and for the required reports of local, State, and Federal agencies:

(1) Number (identification).
(2) Age.
(3) Sex.
(4) Race.
(5) Residence (census tract).
(6) New or old case (first visit or readmission).
(7) Health center or health area.
(8) Place of visit (field, office, clinic, conference, not at home—note left).
(9) Type of service category, for example, tuberculosis and acute communicable disease.
(10) Type of procedure (immunization, test).
(11) Disposition (discharge, return appointment, hospital inpatient, hospital outpatient, private physician, consultant, agency).
(12) Physician (to include consultants on staff of the health department).
(13) Nurse.
(14) Date.
(15) Specific disease, such as cancer or diabetes.
(16) Case—contact or suspect (for communicable disease).

279. Skeleton tables illustrating the desired headings were presented to the record committee for discussion and approval. This pro-

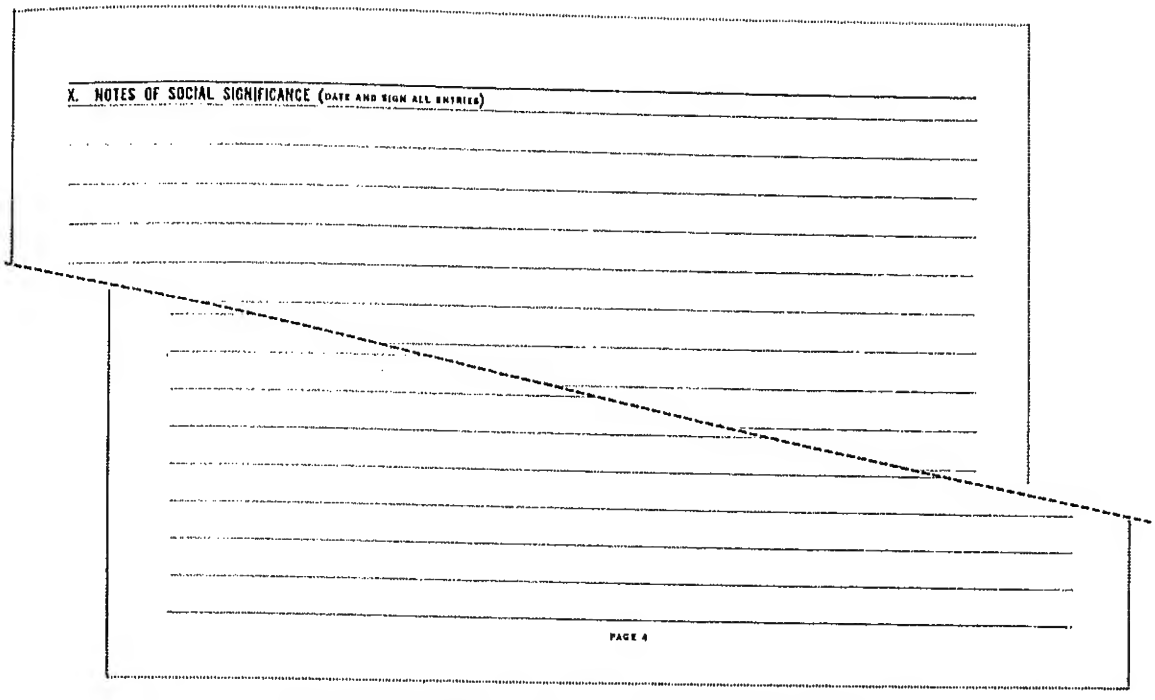


Figure 26. Family roster and social data record (p. 4).

dure aided in visualizing the final tabulations. he titles of the tables selected by the record mmittee for the first monthly report were:

(1) Age group, residence, and status of individuals tending child health conference, with number of sits.

(2) Percentage of population served by child health nferences, according to age group and residence.

(3) Immunizations at child health conferences, by e group of individuals and type of immunization.

(4) Physicians' and inspectors' home visits, by dise category and type of activity—acute communable disease service.

(5) Age group, sex, race, and residence of individuals der supervision of tuberculosis service.

(6) Age group and status of individuals under supersion of tuberculosis clinic, by stage of disease.

(7) Number of cases and number of visits, by age oup and classification of service. Total individuals d families served.

(8) Place of visit and type of activity, by individual rse.

(9) Number of home visits, by classification of servand individual nurse.

(10) Number and type of school health services, by lividual nurse.

stablishing Office of Records and Reports

280. The office of records and reports was rmally opened early in January. Space was tained by moving into four rooms personnel d equipment of the division of infectious disease which occupied six rooms, thus releasing two rooms for the office of records and reports. Personnel were obtained by transferring three employees working on records and reports in various divisions of the health department to the office of records and reports and selecting two employees from the city civil service register. The chief statistical clerk of the division of registration was appointed to the same position in the office of records and reports and assumed responsibility for the management of the office. During the project period, plans were made to employ a biostatistician to direct the office. The personnel and equipment requested and made available were 1 chief clerk (supervisor), 3 clerk-typists, 2 stenographers, and 6 desks, 1 worktable, 5 files (5-drawer letter size), 1 file (containing minimum of 30 drawers for 3- by 5-inch cards), 3 typewriters, 1 key punch and verifier, 1 duplicate card detector, 1 calculating machine. (Available equipment in the division of registration included 1 key punch, 1 sorting machine, 1 adding machine.) Other necessary office supplies, such as paper, folders, and fasteners, were available on request. The necessary equipment (desks, chairs, tables, typewriters) was on hand for the opening of the office and the duplicate card detector, key punch, and

252069 -53— 6

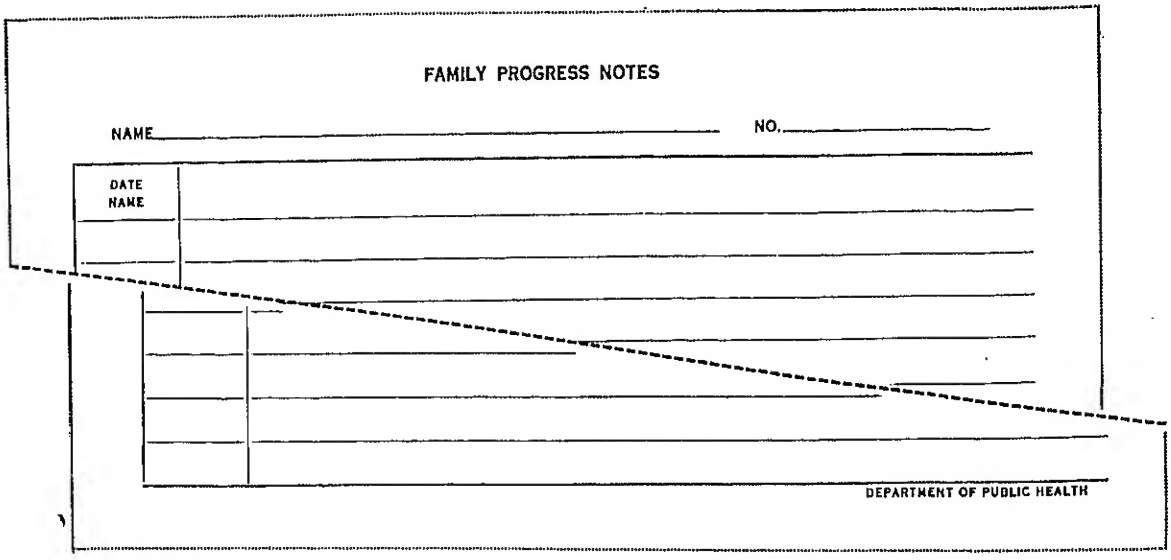


Figure 27. Family progress notes (pp. 1 and 2).

verifier were received in time to complete the January reports.

Steps in Record and Report Procedures

281. The outline below indicates the procedures followed by each person concerned with the records and reports. This outline is for the period during which the records and reports are centralized and under central control before the development of the health centers.

A. Records—first admission of individual (clinic, conference or home visit).
  1. Nursing and medical staff.
    a. Nurse or doctor completes record forms (see figs. 20–27).
    b. Staff supervisor reviews record.
    c. Staff supervisor forwards record to office of records and reports.
  2. Nursing and/or secretarial staff.
    a. Completes tickler card (fig. 6) for individuals for whom future visit is indicated.
    b. Completes appointment book for future visit to clinic or conference.
  3. Office of records and reports.
    a. On receipt of record for new admission, refers to family index to determine if individual or family has had previous admission. Inserts old or newly assigned number on record.
    b. Reviews record for completeness, notations of followup, etc.
    c. Files record.
      (1) New individual record—first admission of family.
        (*a*) Attaches forms to backer.
        (*b*) Prints number and family name on folder.
        (*c*) Files record and folder.
      (2) New individual record—previous family admission.
        (*a*) Attaches forms to backer.
        (*b*) Files record in family unit folder.

B. Records—subsequent admission of individual (clinic, conference, or home visit).
  1. Secretarial staff in nursing office, conference, or clinic.
    a. Requests prior records for home visits and conference and clinic appointments by completion of out card (fig. 15).
    b. Sends the out cards to office of records and reports.
  2. Nursing and medical staff.
    a. Nurse or doctor completes record following visit of individual.
    b. Staff supervisor reviews record.
    c. Staff supervisor forwards record to office of records and reports.
  3. Nursing and/or secretarial staff completes tickler card and appointment list for subsequent followup.
  4. Office of records and reports.
    a. Pulls records requested (inserts completed out card when removing record).

Nurse's Code No. 10

Date	Name of School	Number of Pupils Given Health Services								Number of Nurse Conferences Held in School					Number of Pupils for Whom School Program was Adjusted				Number of Corrections
		Nurse Assistance				No. of Inspections		Pupils Given First-Aid (Relieved Distress)	Pupils Referred for Professional Attention (Med., dental, visual, nose, throat, Xray, etc.)	Teacher		Pupils	Parents	Others (specify)	Heart	Hearing	Sight	Other Reasons (specify)	
		Physical Exams.		Immun	Tests	Group	Indiv.			Group	Indiv.								
		No. Exams	Parents Present																
May 1	Franklin	15	10	-	10	1	25	5	3		2	15	3				1		6
1	East Side	6	1		2		5	5	1		1	12	2						1
3	Addams	12	8		10	1	15	4	3	1	3	4	1						2

Form # NURSING ACTIVITY IN SCHOOL Department of Public Health

Figure 28. Report form for school visits (monthly work record).

Nurse's Code Number: 81

Month: February Year: '53

1. Staff Meetings Attended: (number) 2

2. Community Meetings Attended:

Date	Name of Organization
Feb. 10	Community High School - P.T.A.
Feb. 26	Citizens' Defense Organization

3. Committee Meetings Attended:

Date	Name of Committee
Feb. 20	Health Education (D.P.H.)
Feb. 25	Child Guidance (D.P.W.)

4. Classes Taught:

Date	Location	Subject	No. of Sessions	Enrollment	Attendance
None					

5. Talks Given:

Date	Location	Subject	Attendance
Feb. 13	Nettleton School	Your Health Department	30

6. Other Group Activities (specify):

None

Form # GROUP ACTIVITY Department of Public Health

Figure 29. Report form for group activity (monthly work record).

b. Delivers records to office indicated on out card.
c. On receipt of record following visit, reviews for completeness, notations for followup, etc.
d. Files record in family unit folder.

C. Reports
1. Nursing and medical staff.
a. Nurse or doctor completes daily and monthly report forms (figs. 18, 19, 28, 29).
b. Staff supervisor reviews forms.
c. Staff supervisor forwards forms to office of records and reports.
2. Office of records and reports.
a. Reviews forms received from the medical and nursing staff.
(1) Edits data.

(*a*) If data are inconsistent returns form to office from which received.

(*b*) If form is incomplete, fills in missing data when available in records; if data not available, returns form to office from which received.

(2) Completes coding for school, census tract, etc.

b. For daily work records (figs. 18, 19).

(1) Punches card.

(2) Verifies.

(3) Sorts cards at close of month for monthly tabulations.

c. For monthly work records (figs. 28, 29).

(1) Totals each sheet.

(2) Enters totals for each nurse on work record for final report.

References

(*1*) American Hospital Association. Council on Administrative Practice. Committee on Personnel Relations: Hospital personnel administration. II. Conference techniques. Chicago, The Association, 1949, 141 pp.

(*2*) American Public Health Association. Committee on Administrative Practice: Evaluation schedule for use in the study and appraisal of community health programs. New York, N. Y., The Association, 1947, 54 pp.

(*3*) American Society of Heating and Ventilating Engineers: Heating, ventilating, air-conditioning guide (ch. 12: Physiological principles). Ed. 27. New York, N. Y., The Society, 1949, pp. 213–232.

(*4*) Aronson, J. B.: The family record in the Red Hook-Gowanus Health Center District. Am. J. Pub. Health 40: 1232–1237 (1950).

(*5*) Bellows, M. T.: The registry in the community rheumatic fever program. Appendix II of the Rheumatic fever community program—Its value in the epidemiological study of rheumatic fever. Summary of the symposium *by* David D. Rutstein. Am. J. Pub. Health 38: 1088–1091 (1948).

(*6*) Bellows, M. T., and Ramsey, G. H.: Integration of health department records. Am. J. Pub. Health 29: 636–640 (1939).

(*7*) U. S. Bureau of the Census: Census tract manual. Ed. 3. Washington, D. C., The Bureau, 1947, 16 pp. Processed.

(*8*) Fales, W. T.: Demographic responsibilities of a registration office as developed in Baltimore, Md. Baltimore Health News 22: 165–174 (1945).

(*9*) U. S. Public Health Service: Manual of control aids for an epidemiologic program in connection with a central registry. A. Establishment and operation of a central registry utilizing a multiple epidemiologic report form. Washington, D. C., The Service, 1944 (revised), 21 pp. Processed.

(*10*) U. S. Senate Committee on Labor and Public Welfare: Health insurance plans in the United States. Activities of government in the field of health services. Report of the Committee pursuant to S. Res. 273 (81st Cong., 2d sess.) and S. Res. 39 (82d Cong., 1st sess.). A resolution directing further study of health problems. Report No. 359, part 3 (82d Cong., 2d sess.). Washington, D. C., U. S. Government Printing Office, 1951.

(*11*) Huffman, E. K.: Manual for medical records librarians. Ed. 2. Chicago, Physicians Record Company, 1948, 371 pp.

(*12*) Illuminating Engineering Society. Committee on Lighting Practice: Recommended practice of office lighting. New York, N. Y., The Society, 1942, 47 pp.

(*13*) Leffingwell, W. H., and Robinson, E. M.: Textbook of office management. Ed. 3. New York, N. Y., McGraw-Hill Book Company, 1950, 64 pp.

(*14*) Maryland State Department of Health: Manual on cancer register. Prepared in cooperation with the National Cancer Institute of the U. S. Public Health Service. Baltimore, 1951. Processed.

(*15*) Massey, A.: Modern trends in public health. New York, N. Y., Paul B. Hoeber, 1949.

(*16*) Methods in public health research. Proceedings of a conference . . . of the Public Health Study Section, National Institutes of Health in conjunction with the Graduate School of Public Health, University of Pittsburgh. Am. J. Pub. Health 41: 1–117 (Part II, August 1951).

(*17*) Mikol, E. X.: A manual of methods for organizing and maintaining a central tuberculosis case register. New York, N. Y., National Tuberculosis Association, 1943, 70 pp.

(*18*) Mountin, J. W., and Flook, E.: The place of an index in health department record keeping. Pub. Health Rep. 55: 387–393 (1940).

(*19*) Mountin, J. W., and Flook, E.: Devices for reducing health department records. Pub. Health Rep. Supp. No. 187. Washington, D. C., U. S. Government Printing Office, 1945, 67 pp.

(*20*) Mustard, H. S.: An introduction to public health. Ed. 2. New York, N. Y., Macmillian Company, 1945, 283 pp.

(*21*) Mustard, H. S.: Rural health practice. New York, N. Y., The Commonwealth Fund, 1936, 603 pp.

(*22*) Puffer, R. R.: Practical statistics in health and medical work. Ed. 1. New York, N. Y., McGraw-Hill Book Company, 1950, 238 pp.

(*23*) Richardson, H. B.: Patients have families. New York, N. Y., The Commonwealth Fund, 1945, 408 pp.

(*24*) Rosenau, M. J.: Preventive medicine and hygiene. Ed. 6. New York, N. Y., D. Appleton-Century Company, 1935, 481 pp.

(*25*) State central case record systems and local case registers for tuberculosis. A manual prepared by the Tuberculosis Control Division, U. S. Public Health Service. Raleigh, North Carolina State Department of Health, 1947, 88 pp.

(*26*) Walker, W. F., and Randolph, C. R.: Recording of local health work. New York, N. Y., The Commonwealth Fund, 1936, 275 pp.

(*27*) Weeks, B. M.: How to file and index. New York, N. Y., Ronald Press Company, 1946, 268 pp.

(*28*) West, M. D.: Morbidity reporting in local areas. I. Patterns of reporting. Pub. Health Rep. 63: 329–339 (1948).

Illustrative Examples of Record Systems

282. As previously noted, most health departments have their records and indexes filed in many sections. Cases I, II, III, and IV illustrate the actual record systems in a few of the health departments surveyed.

283. Case I (p. 68) illustrates the record system of a health center in a city-county unit before and after reorganization. The objective of this health center was to serve the individuals of the district by providing the following preventive and therapeutic services: acute communicable disease control; tuberculosis control with routine chest X-ray examinations for all individuals attending the center; health supervision in public and parochial schools; prenatal and postnatal clinic care and followup through well-baby and preschool child health conferences; dental service for school children; venereal disease diagnostic clinic services and complete examination. The services at this center were coordinated with specialized services given by other units, such as a tuberculosis clinic, tuberculosis inpatient service, and a venereal disease control center. The sanitation division, which was located in the administration building, served the center and its district from the central location. The health department asked for aid in setting up a record system which would be "usable and simple."

284. Figure 30 shows the numerous separate sections for medical and nursing records and indexes maintained under a decentralized record system with division control. Under the reorganized system (fig. 31) a central record office was established and central control was instituted. With the centralization of records, the records were combined. The unified record for each individual included all notations of service to the individual given by the medical and nursing staff in the center. All indexes were combined in one file. Central control and centralization of records aided the health staff in integrating available health services.

285. Case II is an example of a decentralized record system in a three-county unit health department. The existing physical plan did not permit centralization of records. The nursing records were filed in 77 separate sections and the medical records in 17 (fig. 32). Combination of certain records was recommended to give the best service possible with existing facilities (fig. 33). A central index and interoffice memorandum aided the exchange of information necessary for service.

286. Case III gives the "before and after" picture of the record system in a health center where a centralized record system with central control was developed from a decentralized system with division control of records. Before reorganization the records were in four offices and in many subdivisions (fig. 34). Through reorganization it was possible to rearrange existing facilities and use one room as a record office (fig. 35). All the records for an individual were combined in one folder. One index aided in the identification of the individual and the location of records; one person was in charge of all record procedures. This change made a unified record available to the medical and nursing staff thereby aiding the staff in giving service and analyzing the effect of the existing programs.

287. Case IV shows the reorganization of records in a sanitation division. This reorganization, like that in the example of case III for medical and nursing records, permitted maintenance of records in one office instead of three. Although records were already under central control, the supervisor was able to institute procedures which were beneficial to the division when the records were kept in one office. Records were combined according to their use by the staff in the division and unnecessary indexes were eliminated (figs. 36 and 37).

288. Case V illustrates the procedures used before and after the installation of a central index. The need for the index was expressed by the administrative and professional staff during individual and group conferences and was emphasized after a special survey determined the proportion of individuals who received service from more than one medical or nursing division in the health unit and from more than one unit within the organization. This health agency consisted of a main health department, five health centers, a tuberculosis sanatorium and dispensary, and a general hospital. The main health department included divisions for communicable disease, maternal and child health, orthopedic, and venereal disease services. Numerous requests were received by the administrative staff for information on patients. Answering a request required telephoning each health unit to determine if the patient had been under its care. Within each unit it was necessary for the clerical staff to search several indexes and, in some instances, groups of records not included in any index.

289. Case VI presents illustrations from two health agencies in which procedures were developed to exchange information on individuals among health units. Each of these organizations had joint housing of health department and hospital. One organization with a city-county health department and a city hospital had,

in addition to joint housing, combined administration. The objective of this department was to give service throughout the area in preventing, controlling, and treating diseases. A flow of records among the units was developed as an aid in achieving these objectives. The other agency, with the county hospital and county health department in adjacent buildings, had similar objectives although the administration of the two units was separate. A flow of records was developed between these two health units which aided in coordinating the preventive and therapeutic services. The medical and nursing staff who were serving individuals had a better understanding of each case when data that included the history, previous treatment, diagnostic tests, and recommendations were available. In each of the illustrations procedures were initiated to meet the immediate need outlined in the statement of objectives. Both organizations planned to install a central index to aid in coordinating all services of the health units.

Case I. Medical and Nursing Records in a Health Center in a City-County Health Department

Before reorganization:

Decentralized Record System.
Division Control.
Separation of Records.

After reorganization:

Centralized Record System.
Central Control.
Combination of Records.

290. One health center in a city-county unit which offered the usual preventive and curative services directed its attention to the individual. Figure 30 illustrates the number and types of files in this center at the time of the survey. The records were the responsibility of each service division. They were located in four offices. The files were separated into minute categories. Records were not only divided by service, but within each service were subdivided into sections—active, inactive, temporarily closed, emergency, financially ineligible. Twelve indexes served as guides to the medical and nursing records. The inactive records of the medical service, for example, were in four categories—emergency, financially ineligible, out-of-district, and deceased. The active and inactive tuberculosis records consisted of 13 files and indexes.

291. In the reorganization following the survey, all medical[1] and nursing records and all indexes were combined. One index thus served to determine if an individual had had previous service and to obtain the unit number of the record. One clerk became responsible for the records and record procedures. Records were filed by the individual unit record method in numerical order. Reorganization condensed the number of record sections from 63 to 4 as illustrated in figure 31. Physicians and nurses on the staff were able to review the entire record of the health department's service to the individual before each visit and were, therefore, better prepared to serve each individual. The cards in the tickler file, previously used as a source of data on former visits, were rearranged. Following rearrangement the cards were assembled in separate files. Each file represented the active case load of one nurse. The files were used as aids in planning future services.

[1] Medical records are defined here as the doctors' records of clinic or home visits; nursing records, as the records of nursing care either in the home or clinic.

Case II. Medical and Nursing Records in a Three-County Unit Health Department

Record system at time of survey:

Decentralized Record System.
Division Control.
Separation of Records.

Reorganization plan after survey:

Decentralized Record System.
Division Control.
Combination of Records.

292. The organization of medical and nursing records in a three-county unit health department is illustrated in figure 32. Records in this center were located in three rooms on the first floor and in two rooms on the second.

293. An index was maintained for nursing records only. The primary purpose of the index was for guidance in the location of records. As the records were filed according to service category, period of activity, and geographic district, it was essential to keep current on the index card dates of admissions to services, changes of address, and dates of discharge. These entries indicated the current service, the geographic district, and the active or inactive status of the case. Numerous entries were made daily on the index cards by the clerk, but frequently they were not up to date. As a result, the index failed in its purpose.

294. In the section on nursing records the four boxes on the chart indicate the period of activity of the record: active, current midway, central, and inactive. Each of the first three divisions was subdivided into four parts (according to the nurses' geographic districts). In the current midway and central sections each of the four geographic districts was divided further according to the following eight services: infant, preschool, tuberculosis, planned parenthood, orthopedic, midwife, antepartum, postpartum. The inactive section contained nine divisions. The first

eight included the inactive records filed by service; the ninth held merely empty jackets, since the service records were removed when they became inactive. As figure 32 indicates, the nursing files had 77 subdivisions. The medical records had 17 sections, of which 12 were for the venereal disease service. The records of venereal disease patients were subdivided into the following sections: current, lapsed, rapid treatment, contact, closed contact, probated, and closed. The cards recording serologic tests were filed in three groups: active, inactive, and awaiting blood test. The laboratory report files were in two sections: reports from the State laboratory and reports from the rapid treatment center.

295. Four files were maintained for the immunization records: one for the incomplete or active records and three for the complete or inactive records. A search of all four files was necessary if neither the type of test nor stage of completion of the series was known.

296. Figure 33 illustrates the reorganization outline of the record system of this health department. The nursing index was expanded to include cards for medical services.

297. The numerous divisions of the files were eliminated by interfiling the records thus reducing the number of locations in which it was necessary to search for a record. The laboratory file was eliminated since the test results were entered on the medical and nursing records as soon as the reports were received. It was necessary to have the school records available for the periodic visits of the health department staff to the school. School records were, therefore, filed according to the school within each of the three counties. This arrangement was also satisfactory for the necessary followup examinations which the health department staff made in the department, school, or home.

Type of record:	Number of files	
	Before combination	*After combination*
Nursing	77	6
Medical	17	4
Immunization	4	2
Serologic test	3	1
Laboratory	2	0

Case III. Medical and Nursing Records in a Health Center in a City-County Health Department

Before reorganization:

Decentralized Record System.
Division Control.
Separation of Records.
Inefficient Use of Available Space.

After reorganization:

Centralized Record System.
Central Control.
Combination of Records.
Efficient Use of Available Space.

298. The reorganization of a record system in one health center achieved far better utilization of existing facilities when a central record office was established in the center. The available space in the center was compact; the usual medical and nursing services were provided. Since sanitation service for the area was given from the central office of the health department, no sanitation records were kept in this unit.

299. Figure 34 illustrates the arrangement of records in the four offices before reorganization. Five clerks were responsible for the records of this health center. Office I contained a portable file for the semiweekly dental clinics and records on venereal disease, communicable disease, completed immunizations, and crippled children. This room was also used as an auxiliary nursing office. Although each nurse kept the active nursing records in her desk in office IV, additional nursing records were filed in office I. The clerk responsible for records in office I was the secretary to the director of the unit. Four clerks in office II, located at the opposite end of the waiting room, handled tuberculosis, medical, surgical, infant and preschool, and dental records. Another group of tuberculosis records (pneumothorax) was kept in office III, which also was used as a special admitting office.

300. There was considerable traffic between the two main record rooms (offices I and II) and office III. Most of this traffic resulted from the fact that the records for the medical and nursing departments were kept separate. Within each office, moreover, individuals' records were filed by service; an individual had a separate record made for each type of service he received. The index cards to the records were also filed by service, making it necessary to consult several indexes to obtain a complete picture of the services received from the health center by any one individual. This arrangement was obviously inefficient.

301. Since the location of this office within the health center permitted keeping all records in one office, the plan outlined in figure 35 was instituted. Office II became the central record office, housing the records for individuals and the index. The several indexes were combined into one file. The medical and nursing records for each individual for all services were combined and filed in individual unit folders in office II. Records are now located in 1 office instead of 4; 1 index file replaces 12; 1 file of individuals' records replaces 9; 2 files of immunization records are interfiled, making 1 file. The diagnostic index was eliminated as this service is now a part of the reporting system. The centralization and combination of records saved time, increased efficiency, and eliminated the need for one clerk. A smoothly operating record system was the result.

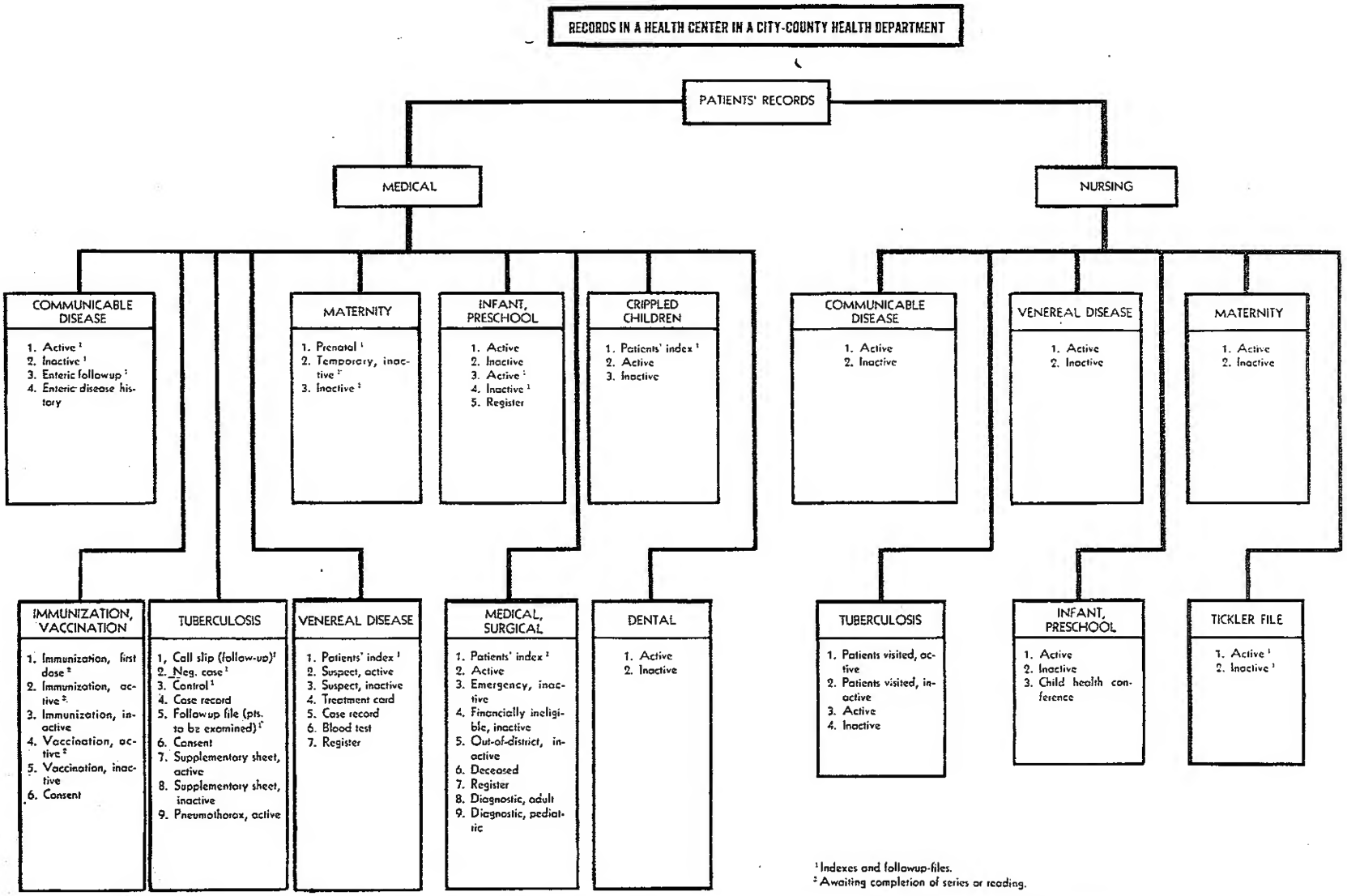


Figure 30. Arrangement of records before reorganization, illustrating decentralized record system and separation of records.

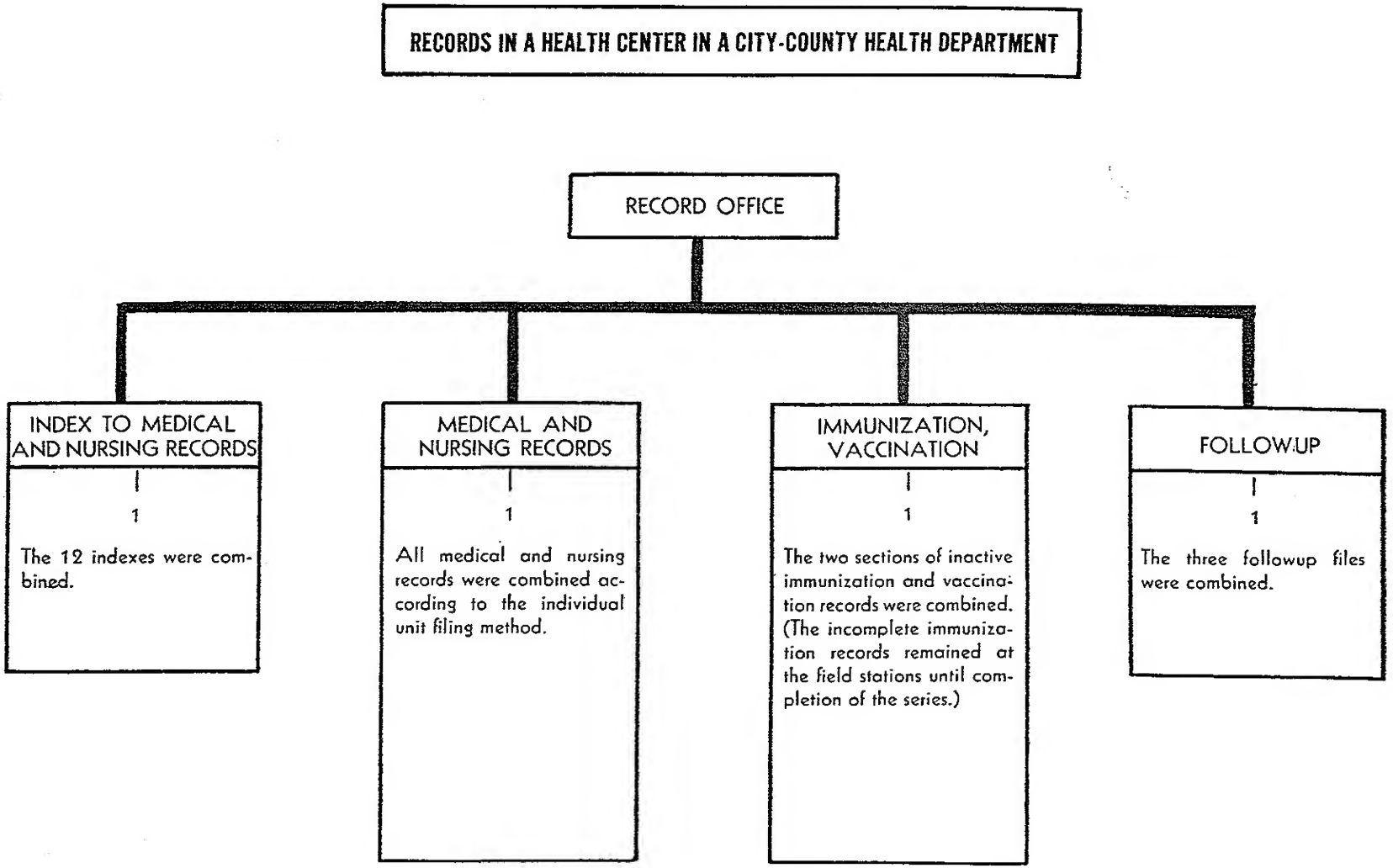
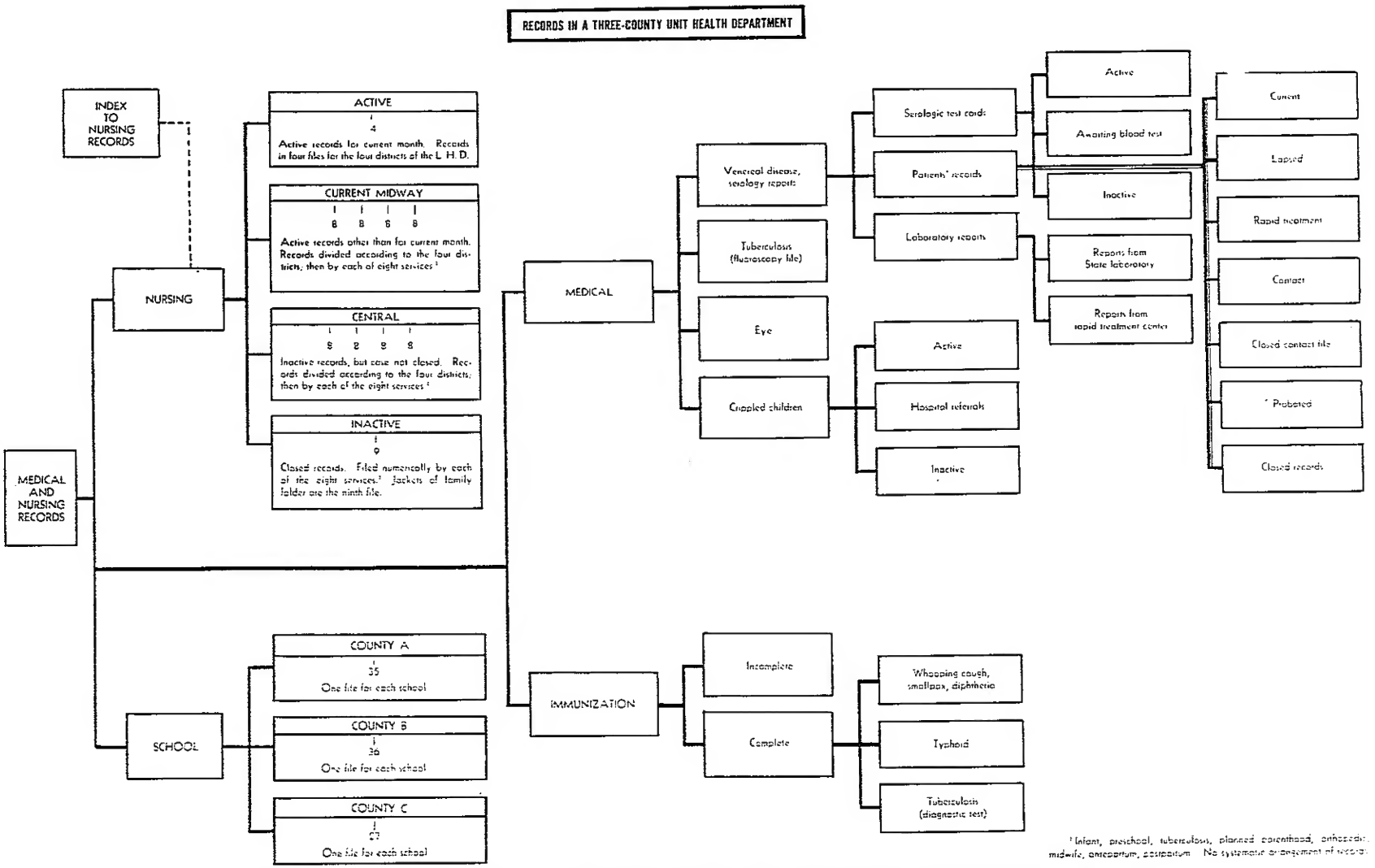


Figure 31. Arrangement of records after reorganization, illustrating centralized record system and combination of records.



[1] Infant, preschool, tuberculosis, planned parenthood, orthopedic, midwife, antepartum, postpartum. No systematic arrangement of records.

Figure 32. Arrangement of records illustrating decentralized record system and separation of records.

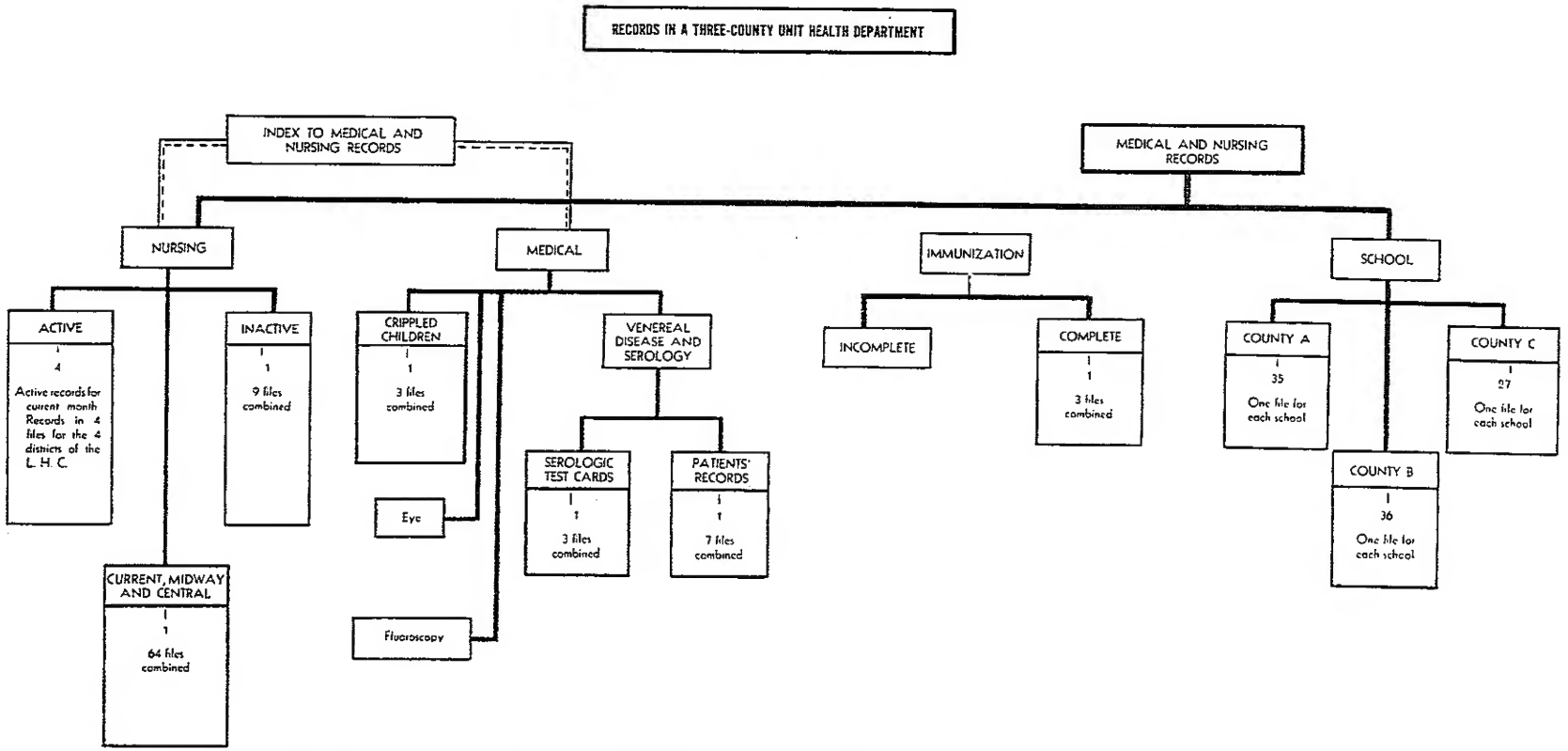


Figure 33. Arrangement of records illustrating decentralized record system and combination of records.

Case IV. Sanitation Records in a City-County Health Department

Before reorganization:

Decentralized Record System.
Central Control.
Separation of Records.
Inefficient Use of Available Space.

After reorganization:

Centralized Record System.
Central Control.
Combination of Records.
Efficient Use of Available Space.

302. The record system in the sanitation division of a city-county health organization before reorganization is illustrated in figure 36. The records were located in three offices. Two of the offices were close to each other, but the third was at the opposite end of the corridor. Four record clerks were in the food and sanitation office, two in the milk control division, and one in the veterinarian's office. The necessity for telephone service and the usual clerical activities made it essential to staff each of the offices with one or more record clerks. Records were inconveniently arranged. The indexes, arranged in the same way as the records, were ineffective cross-reference tools.

303. The food and sanitation division had eight indexes to the inspection records: four for the city and four for the county records. Two of the city indexes were arranged by address in the same order as the records and were therefore useless. The other two city indexes were arranged by name of proprietor of the restaurant, grocery, or other establishment. Since information was rarely requested by name of proprietor, the use made of the indexes did not warrant their maintenance. The four county indexes were equally valueless: two were arranged in the same order as the records and two by address. The address arrangement for the county was of little value because of confusion in names of streets, roads, and routes. Of the two indexes in the milk control division, one was arranged by permit number as the inspection records were, the other by name of establishment as the ledgers. It was found that these two indexes as well as the eight indexes for the food and sanitation division could be eliminated.

304. Centralization of files and combination and rearrangement of the records were effected in the reorganization of this record system. Centralizing records from three offices into one office permitted better service. The supervisor of the record office was able to distribute the duties more evenly and could maintain more uniform methods and procedures than was possible when the records were in three locations. As illustrated in figure 37, the three city inspection rec-

[1] the two county files were combined.
y few records are maintained and when
ged in an order which accords with the
requests for information, indexes for
are unnecessary. The four divisions

of school inspection records were combined so that there was only one place to look for a record.

305. Frequent references were made to complaint records in this department; therefore, it was deemed advisable to keep these records for a short period. The seven completed files were combined into one file and the records were filed according to address. The other seven files represented uncompleted investigations. These files were eliminated as soon as the investigations were finished. The two ledgers (chronological files) for the food and sanitation division were discontinued when the reporting system of the division was reorganized. The one ledger in the milk control division has been continued. The followup procedure (calendar memorandum) was expanded to include notations for the milk control and the meat inspection and animal disease sections. A general subject file was introduced to assist the secretary in filing correspondence, personnel records, notices, pamphlets, and reference material.

Case V. Establishing a Central Index in a City-County Health Department

306. A city-county health department, comprising a main health department, five health centers, a venereal disease control center, a tuberculosis sanatorium, a tuberculosis clinic, and a city hospital, requested assistance in installing a central index. The department received numerous mail and telephone requests for data on individuals who, it was assumed, were receiving service in one or more of the units of the department. Each unit maintained many separate filing sections for records and indexes. Figure 30 shows the arrangements of records and indexes in one of the health centers. In answering an inquiry it was necessary to telephone to each unit; in each unit, moreover, it was necessary to search all the separate groups of records and indexes to determine if the individual was receiving or had received service. A central index was under consideration to obviate the possibility of duplicating diagnostic services. Under existing arrangements a chest X-ray, for example, might be ordered within the same week for the same individual by the hospital clinic, tuberculosis clinic, and tuberculosis sanatorium.

Survey of Need for the Index

307. To determine need for the index a special survey was conducted to find out how many persons received services from more than one medical or nursing division within the health unit and from more than one unit within the department. This survey covered a 5-year period and involved a study of 10 percent of the different sets of index cards within the entire health organization. The study showed that 17 percent of the persons served received services from more than one division or from more than one unit of the health department. Of this 17 percent, a third received services from either the inpatient or outpatient depart-

ments of the city hospital during the same 5-year period.

308. Records of an individual who reported for prenatal care in a health unit revealed the prior receipt of the following services:

Hospital record—two previous deliveries, one of which resulted in a stillbirth.

Sanatorium record—one admission of a year's duration; diagnosis of minimal tuberculosis, inactive.

Venereal disease unit record—one visit, negative Wassermann, history of contact.

Existing records of an individual who reported for the first time to the tuberculosis clinic health unit revealed:

Hospital outpatient department—attendance at diabetic clinic, failed to keep appointment 6 months before current visit.

Health center—report of chest X-ray with questionable pathology; report of nursing visits revealed individual had moved from the city.

309. The staff decided that a central index would enable the professional staff to know the units in which a patient has been seen and the date of admission to those units. It was recognized that a central index is, of course, needed only in a health organization that must maintain decentralized records.

Preparation for the Index

310. The following three steps were completed before the central index was set up: (1) A location for the central index was selected; (2) existing indexes to medical and nursing records within each health unit were combined; and (3) a central index exchange record was designed and an outline drawn to indicate its flow between each health unit and the central index.

311. The location of the index was determined by available space, equipment, personnel, and telephone service. In this community, the city hospital and health department were under the same administration. The record office of the hospital was selected as the best place for the index since an extensive patients' index was already maintained there. Addition of duplicate health department index cards to the present hospital index was recommended. These combined cards would constitute the central index.

312. A form similar to the central index exchange record (fig. 12) was designed as the record to be completed in each unit the first time an individual was admitted after the central index was started. At the close of each day the completed forms were to be sent to the record office in the hospital where the index would be checked to see if the individual had been previously admitted to one or more of the centers in the health organization. If the individual had a previous admission, the unit number would be recorded in the space provided and the name of the health center and the year of admission would be entered on the lower half of the form, which would then be returned to the unit from which it was received. This procedure would inform the staff in that unit of the existence of other records. They could then request any desired data from another unit of the health organization. If no card was found in the central index, a number would be assigned and an index card prepared and filed. The central index exchange record would be returned to the center from which it was received with no entry on the lower half of the page. Completion of this form would be necessary only on the first admission of an individual to the health unit.

Case VI. Facilitating Interchange of Information Among a Health Organization's Units

Tuberculosis Service

Existing Gaps and Duplications

313. Service was given to patients known to have, or suspected of having, tuberculosis by the following units within the health organization: tuberculosis sanatorium, tuberculosis clinic, main health department (nursing division), and two health centers. The review of the record system revealed that, although there was a transfer of X-ray films among units and a transfer of nursing records between the clinic and the preventive units, there was no provision for transfer of records which included socioeconomic information, history of illness, notes of medical service furnished, statements of progress, reports of diagnostic tests and examinations, and the recommendations made. The gaps were most noticeable in the instances described below:

314. *Transfer of patients from sanatorium to home and clinic supervision.* For home visits following discharge of patients from the sanatorium, nurses received insufficient data to enable them to give intelligent service to the patients and their families. Data which were not available at the time of the home visit and which would be of assistance were: recommendations regarding exercise, rest periods, amount and type of work, diet, and the date of the next clinic visit.

315. *Transfer of patients from home and clinic supervision to sanatorium care.* Neither the medical record nor a summary of its contents was forwarded to the sanatorium on admission of a patient. Each case was reviewed at a staff meeting in the clinic before the patient's admission and at the sanatorium about 1 to 2 weeks after admission. Both meetings were attended by the medical director of the clinic and the medical director of the sanatorium. It was found, however, that the physicians and medical students at the sanatorium performed many duplicate examinations and tests before the staff meeting. Many of these procedures could be eliminated if an abstract of the clinic record were available. Notes on the socioeconomic problems of patients made by the public health nurse during a home visit or admitting interview were not sent to the medical social worker at the sanatorium.

316. *Admitting procedures at clinic, general hospital, and sanatorium.* Patients were interviewed in the clinic before admission to the sanatorium to obtain

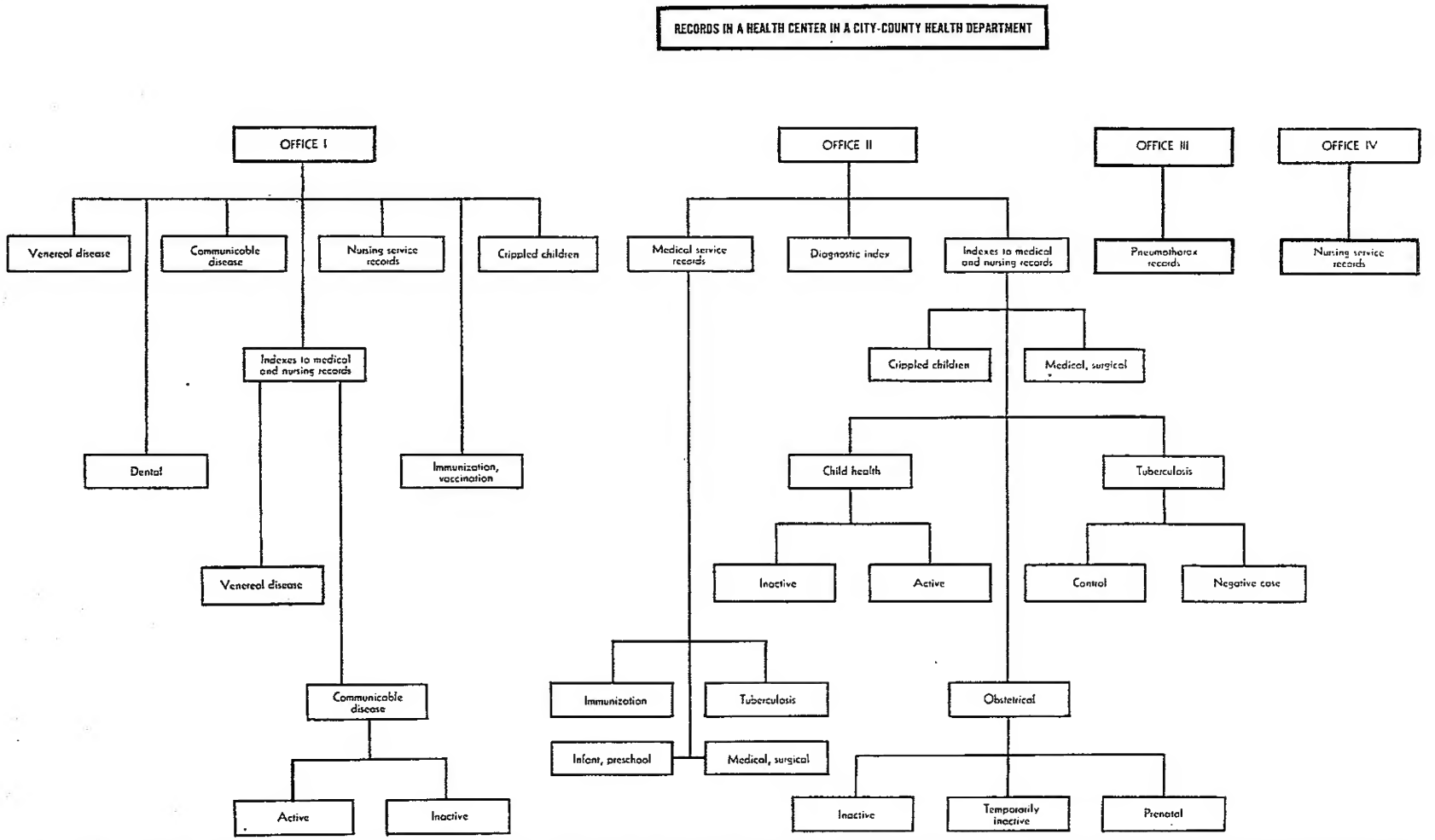


Figure 34. Arrangement of records before reorganization illustrating decentralized record system, separation of records, and inefficient use of available space.

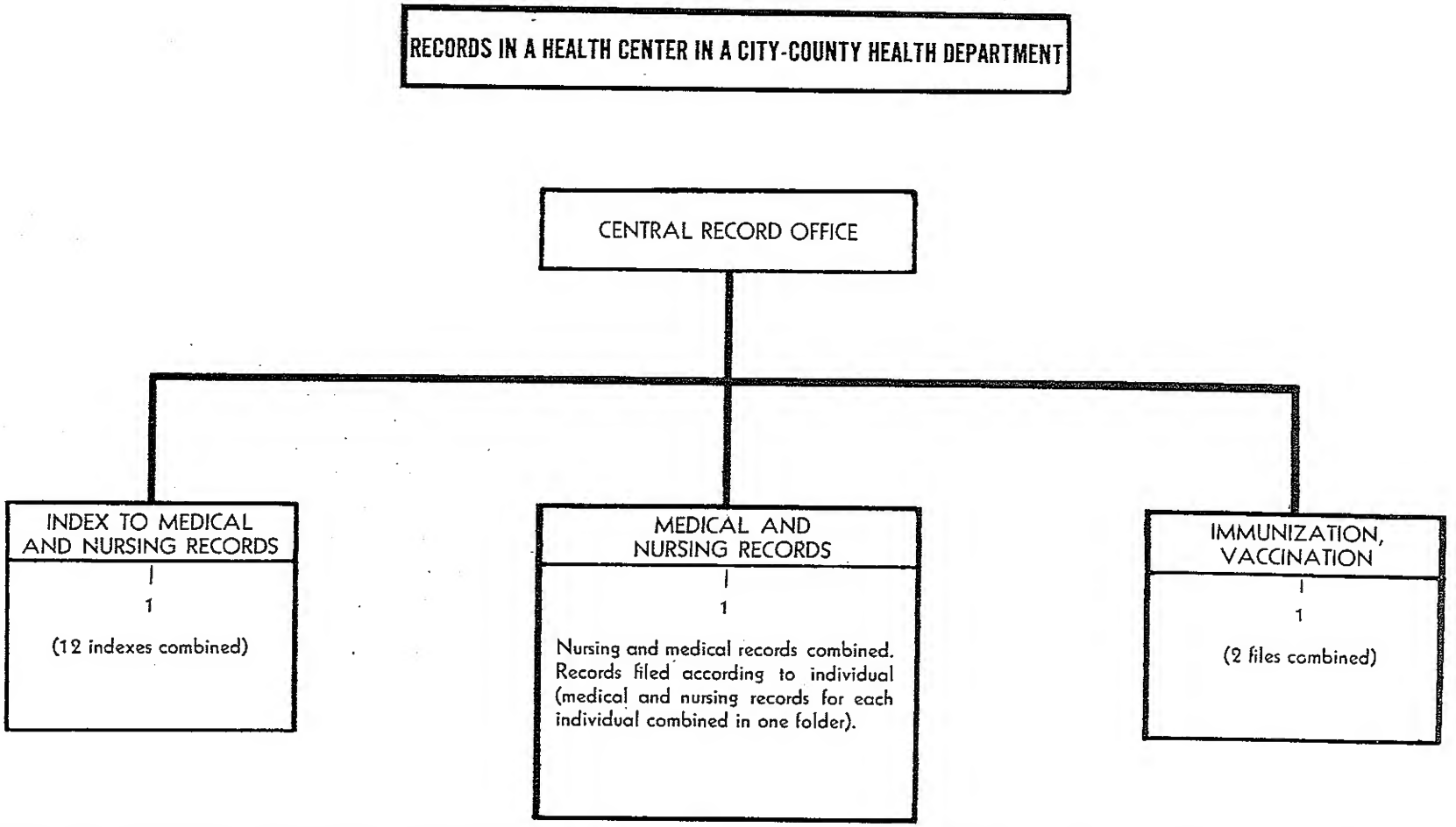


Figure 35. Arrangement of records after reorganization illustrating centralized record system, combination of records, and efficient use of available space.

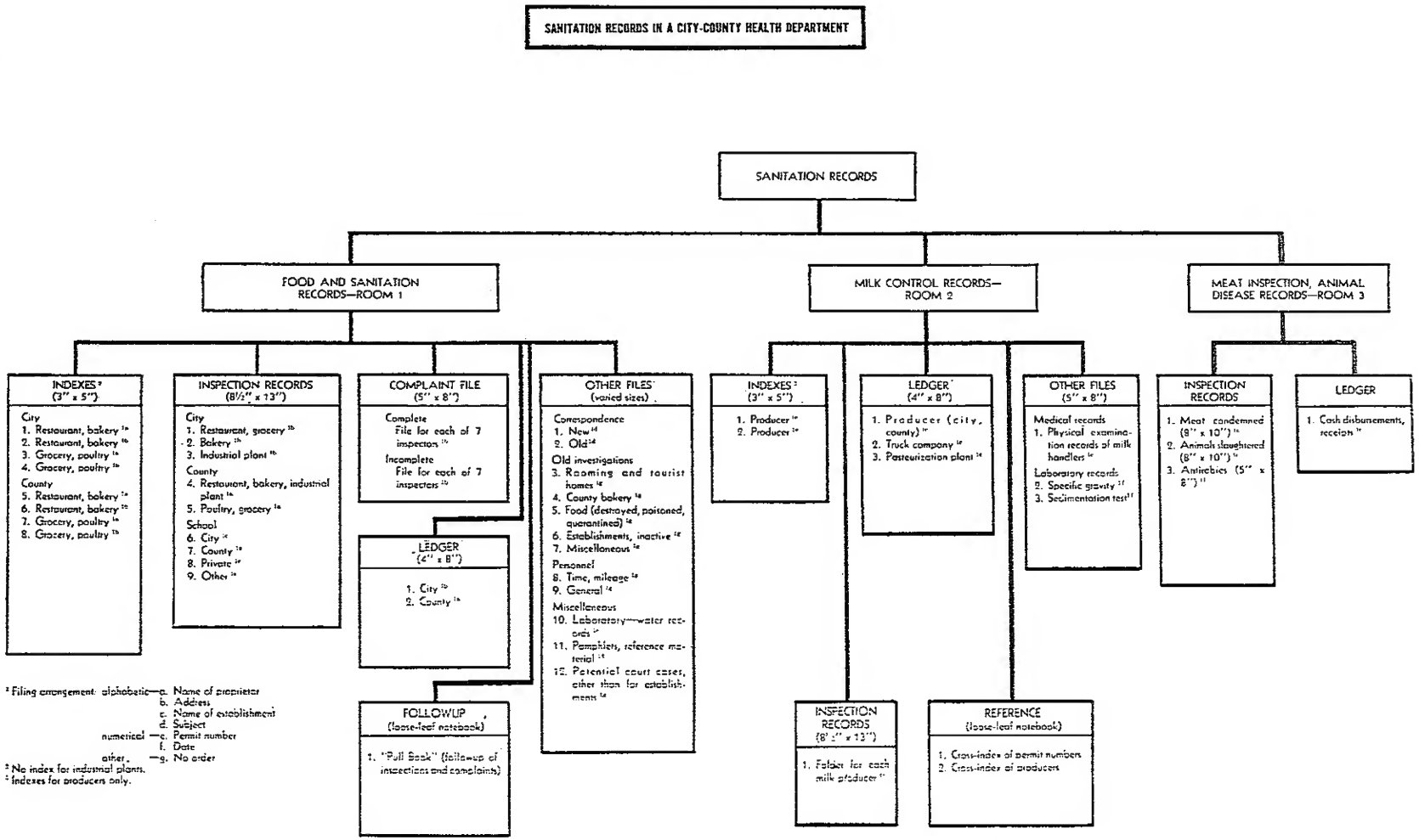


Figure 36. Arrangement of records before reorganization illustrating decentralized record system, separation of records, and inefficient use of available space.

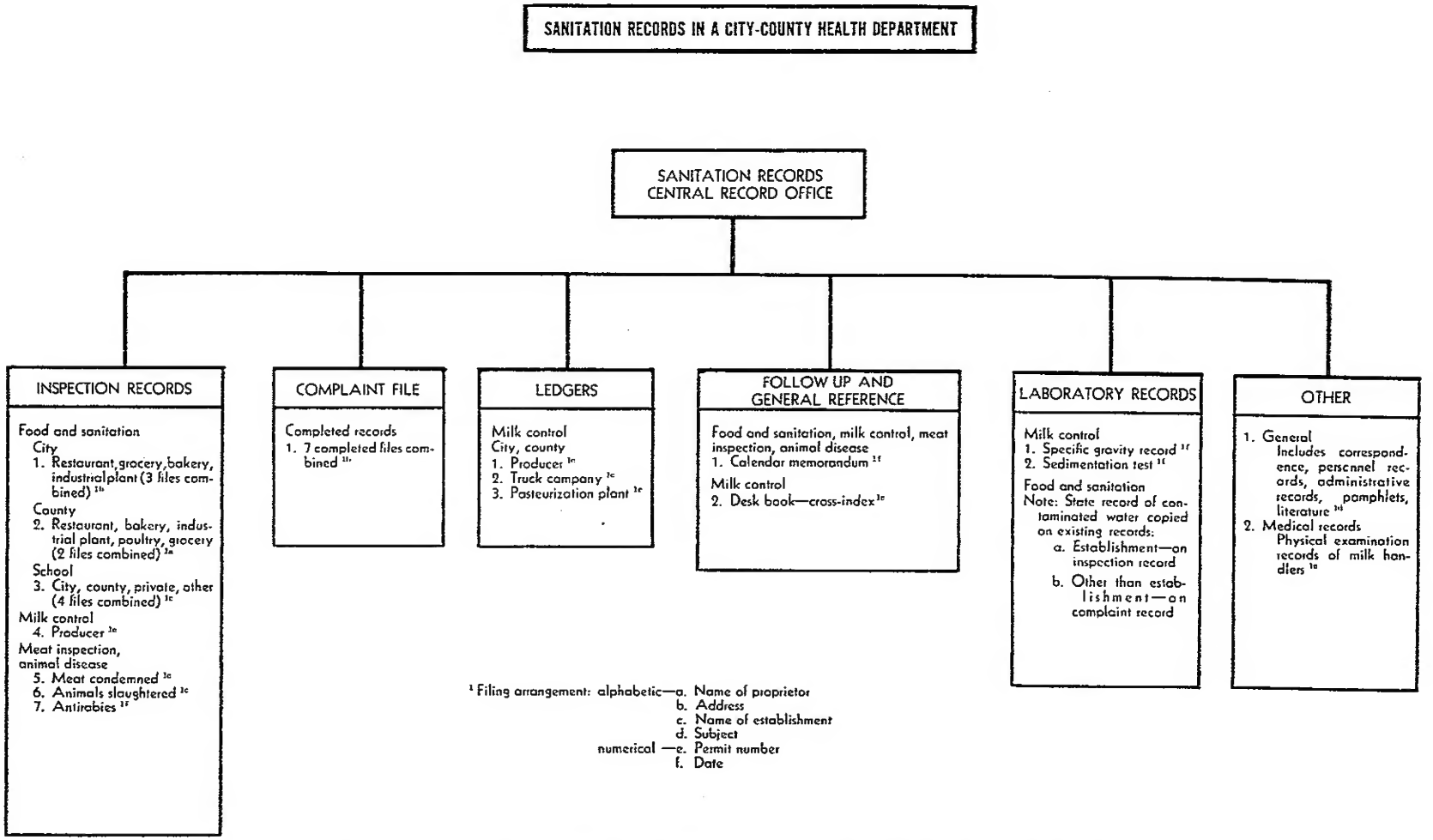


Figure 37. Arrangement of records after reorganization illustrating centralized record system, combination of records, and efficient use of available space.

proof of residence and in the general hospital to ascertain their financial status. Since the data obtained in the hospital were not sent to the sanatorium, the patients, on admission, were again subjected to another interview to get necessary identification data (address, birth date, name and address of closest relative, and family physician).

Changes Made

317. The administrative, medical, and nursing staff of the tuberculosis service held conferences on the gaps and duplications. They outlined and instituted these procedures:

Transfer of data on the discharge recommendations from the sanatorium to the clinic for nursing followup. Forms containing space for the following information are mimeographed at the sanatorium offices: name of patient, address, birth date, date of discharge, recommendations regarding exercise, rest periods, amount and type of work, diet, and date of next visit to the clinic. This form is completed by the physician when the patient is discharged; it is forwarded to the nursing supervisor at the clinic and sent to the public health nurse who makes the followup visit. An abstract of the hospital record is sent to the clinic.

Transfer of data on clinic service from the clinic to the sanatorium. When X-ray films are read the medical director of the clinic dictates a medical summary on each case for which sanatorium admission is indicated. This summary is typewritten on the back of the admission record form and is ready for the staff meeting at the clinic when the case is discussed. After that meeting the summary is forwarded to the clerk responsible for interviewing the patient for admission to the sanatorium. Additional identifying information to complete this form is obtained at the same time and the form is forwarded to the sanatorium. The public health nurse after interviewing a patient before admission to the sanatorium forwards a brief summary of the patient's social and/or economic problems to the medical social worker at the sanatorium. This summary assists in screening cases and in obtaining data which otherwise might not come to the social worker's attention for several weeks. The social worker can thus give better service to the patient and his family during hospitalization.

Admitting procedures and transfer of data to sanatorium. The clerk at the tuberculosis clinic who interviews the applicant regarding proof of residence has received instruction in the technique of financial interviewing. Both types of interview are now completed at the same time, eliminating the need to send the patient to the admitting office of the hospital for special questioning. Identifying data available from the clinic record are transferred to the medical summary by the clerk. Additional identifying data required by the sanatorium are obtained during the interview and noted on this form. The medical summary with complete identifying information is forwarded to the sanatorium as soon as the interview is completed. At the sanatorium the summary is sent to the supervising nurse of the ward to which the patient will be admitted.[a] This procedure eliminates repetitive interviews and also gives the sanatorium staff essential information that might not be obtainable if the patient cannot be questioned on admission. In case of an emergency admission the sanatorium nurse must follow the former admission routine and obtain the identifying data directly from the patient.

NOTIFICATION OF ADMISSION

Name Williams, James Charles	Birth Date 9-4-45
Address 450 East Hamilton Rd., North Haven	
Date of Admission 6-10-51	Service
	Admitting Office Hospital

Figure 38. Notification of admission.

General Service

Existing Gaps and Duplications

318. Outpatient service was given to patients in the health department and inpatient service was given in the jointly housed, but separately administered, hospital. There was no established routine for the interchange of medical or nursing data between the two health units. As a result, services and diagnostic studies were duplicated and no coordinated attempt was made to follow through on the medical and nursing treatment of the patient.

Changes Made

319. During conferences the hospital and health department administrative, medical, nursing, and clerical staff outlined and instituted these procedures:

Procedures in admitting office of hospital. A form for notification of admission (fig. 38) is completed for all patients whose payment is guaranteed by the welfare department or whose source of payment is undetermined at time of admission. The forms are sent to the health department daily as a notification of admission.

Procedures in health department on receipt of notification of admission. The individual name index is searched to determine if the patient has had previous service from the health department. If so, the record itself or an abstract of it is forwarded to the hospital for use on the ward during the patient's stay.

The public health nurse is notified of the patient's admission, and is able to make a hospital visit instead of a fruitless call to the home. In addition, by her immediate contact with the physician and the hospital nurse, she is able to follow the case more intelligently.

Procedures in record office of hospital. If the record of a discharged patient contains an outpatient record or abstract, an abstract of the inpatient admission is completed and sent to the health department.

[a] There is no central admitting office in the sanatorium.

Maternity Service

Existing Gaps and Duplications

320. Prenatal and postpartum outpatient service was given in the health department and the delivery occurred in the hospital. A record of each examination was sent routinely to the attending physician. This physician, however, was not always available for the delivery. Maternity patients were being admitted for delivery without the intern, resident, or attending physician having knowledge of, or access to, the prenatal examination findings, which included history, physical examination, measurements, laboratory and X-ray reports, progress notes, and recommendations. This record was in the health department and available only during regular office hours. When the patient was discharged from the hospital, neither the hospital record nor an abstract of this service was being sent to the health department for use by the staff responsible for followup examinations or home visiting.

Changes Made

321. The improvements in procedures outlined in staff conferences and subsequently effected are:

Procedures in health department. Since it was routine to make a copy of the record of every examination of the patient for the attending physician, an additional carbon copy is now made and forwarded to the admitting office of the hospital.

Procedures in admitting office of hospital. The carbon copies of examinations of prenatal visits for each patient are combined and filed alphabetically awaiting the admission of the patient. On admission the duplicate records are attached to the hospital record and thus are available for use by the physician.

Procedures in record office of hospital. The record of a discharged patient that contains an outpatient record or abstract is notification to the record office that an abstract of the inpatient admission is to be completed and sent to the health department.

Basic Principles Governing Service Statistics in Public Health

322. The following statement of basic principles governing service statistics in public health was prepared as the Report of the Working Group on Service Statistics at the Public Health Conference on Records and Statistics April 1951 and approved by that conference as a working document. The conference, sponsored by the National Office of Vital Statistics, Public Health Service, is a permanent organization that provides a mechanism for the development and improvement of public health records and statistics. Annual meetings are held with the primary purpose of bringing State registrars, vital statisticians, and other public health statisticians into closer working relationship.

323. It was the consensus of the working group of last year that the future work of this group should be directed primarily to the problem areas of service statistics and their definition, with a view to developing statements of the general operating procedures which should be followed in the collection, analysis, and interpretation of service statistics. It was further decided that the formulation of such statements could best be developed through specific studies. Accordingly, this working group has developed a statement of general principles which it feels is the first step toward accomplishing this directive.

324. During the year, the working group has analyzed and endeavored to evaluate what has been done by ten State and five local health departments toward determining the minimum information needed by health departments at the operating level. All studies analyzed represent current, though not unanimous, approaches to the problem of service statistics.

325. The working group found it impractical to appraise each item of information included in the reporting system of each State and local health department under study. Instead, since each reporting system embraced several main types of data, the group chose to evaluate these separate classes of information. From the conclusions drawn regarding the types of information needed in these several areas, the group has evolved its report.

326. This report attempts to enumerate a set of basic principles for the development of meaningful service statistics. The working group recommends that these principles serve as a basis of discussion with other groups having a mutual interest in the field of service statistics, particularly the Association of State and Territorial Directors of Local Health Services and the National Organization for Public Health Nursing.

The working group believes that the following principles should govern the collection, tabulation, analysis, and interpretation of service statistics.

327. Principle I. Service statistics should serve one or more of the following purposes:

(*a*) Help define the health problems of the community.

(*b*) Help measure extent of the program.

(*c*) Help measure progress in relation to problems.

(*d*) Help furnish a basis for future program planning.

(*e*) Help provide data required periodically by the general public, local appropriating bodies, and State and Federal health agencies contributing financial aid.

328. Principle II. Information accumulated for service statistics should meet the following tests:

(*a*) It should be not only useful, but actually used.

(*b*) It should be valid.

(*c*) It should be significant for the purpose it is supposed to serve.

(*d*) It should be readily available.

(*e*) It should justify the time and expense involved in its collection.

329. Principle III. In order to be most meaningful, service statistics should be related to baseline data:

Demographic information (such as population by age groups, natality, morbidity, and mortality information).

Information regarding the housing, sanitation, nutritional, and general economic status of the community.

Health needs of special groups.

Information describing health facilities, services, and personnel available under public, voluntary, and private auspices.

Information reflecting expenditures.

330. All of the systems of service statistics under a study undoubtedly envision the accessibility of baseline data of these types. However, definite provision must be made for correlating such information with the service statistics accumulated. Too frequently, while the several bodies of data are available, there is no organized method by which they are brought together.

331. Principle IV. The most important concept concerning service statistics is that such statistics should, generally speaking, measure services directed to individuals and their environmental hazards and not attempt to measure staff activities.

332. One State plan follows this principle—placing major emphasis on number of persons served and types and amount of service received, and not on numbers of visits and inspections made or other such measures of volume of staff activity. Likewise, the statement of principles for another State reporting system specifically lists this principle though some of the items included do not conform. Most of the other systems also seem to emphasize services, but some include other aspects as well, especially in the public health nursing and health education items.

333. Principle V. The gravest criticism of utilizing activity counts for service statistics is the fact that a false sense of accomplishment may be engendered in health department personnel.

334. When so many activities are recorded, there is severe temptation to think that every minute of the working time should be tabulated as evidence that full time and attention have been accorded the job. This leads to the desire to account for every letter answered, telephone call made, and even the time spent in preparing the activities report itself.

For example, items such as "Meetings attended as a part of duty," "Newspaper articles prepared," "Hours spent working on records," "Conferences with clerical personnel," "Attendance at professional meetings," "Attended special meetings," "Meetings attended," etc., may have administrative value to the supervisor or the program director in evaluating the distribution of staff activities, but they do not contribute directly to the measurement or evaluation of program services.

Effectiveness of an educational program cannot be measured by number of pamphlets distributed, films shown, talks given, etc. Attendance at a meeting or carrying away literature may have no relation whatsoever to what the individual learned through contact with the health information.

335. These questionable types of service statistics, enumerating the multitude of activities of health personnel, arise from attempts to get quantitative indices of how much is being done in this or that program. However, mere counts of activities, without being related to the need or unmet demand for a service, add very little to knowledge of the problem or to program planning.

For example, the important thing to know in connection with immunization is the level of immunization in the community. Counting up the number of immunizations given at specified places falls far short of giving that essential knowledge.

336. For measuring the amount of work done, gross counts will be meaningful only for activities expressed in standard work units, such as tuberculin tests, X-rays, clinic hours held, sputum examinations, etc. For such activities as medical consultations, medical social work, or nursing visits, it will not be meaningful unless the content of the service is specified.

337. For supervision, counts of activity may be useful where work can be measured on a production basis, such as laboratory examinations made or X-ray films taken. On the other hand, when work to be evaluated is of such nature that it cannot be described in easily measurable work units, this type of information lacks validity since many factors besides numbers of activities participated in are important. A mere count of activities performed reveals neither the quality of service rendered, nor the time required, nor the results obtained.

338. For informational and budgetary purposes, such counts have little meaning unless expressed in terms of progress toward a goal and of comparison with known needs and/or standards for service. For determining relative emphasis placed on different segments of the program, enumeration of activities is revealing only for those parts of the program which are comparable.

For example, a count of nursing visits or admissions for two programs cannot be considered a valid comparison of relative emphasis if one program consists of clinic and home nursing services, while the other is carried out through home nursing visits alone.

339. The more valuable service statistics—those measuring services to individuals—are based on counts of the patient load according to whatever breakdowns are significant (age, sex, race, residence, etc.) and to the categories and amount of service received, grouped so that service is related to the problem. Such data are needed for both program planning and evaluation.

For example, more useful information on maternity services can be obtained by relating antepartum delivery, and postpartum services to the women who were delivered within a specified period, than by getting unrelated counts of the three types of services. The following pattern of service statistics for a tuberculosis screening activity relates activity to the problem, specifically the number screened to the population concerned:

Percentage of population screened.
Films read.
Number recommended for large X-ray.
Number receiving large X-ray.
Number referred to physician.
Number referrals completed.
Number diagnosed as active.

340. By such relationship of information, the number for whom rechecks were recommended, the percent of individuals tested who had evidence of a disease, and the number confirmed by private physicians provide a guide to the validity of the test. The number

for whom rechecks were recommended and completed is an indication of the adequacy of followup. Reporting on this basis makes possible good comparison of services between various areas and between selected periods of time.

341. Principle VI. Unduplicated counts of individuals receiving service is useful information to local health departments.

342. Principle VII. Service statistics as here discussed should, for the most part, be a byproduct of administrative operation of a program.

343. Maintenance of records and compilation and interpretation of statistics should be an integral part of program management. Case records of individuals served by the health department constitute the best source of service data in a well conducted department.

344. Principle VIII. To promote the use of selected information from case records, the basic record system should be so designed that pertinent items can be related without the necessity of searching through scattered sources.

345. Principle IX. A review of the service record for each individual under health department supervision should be made regularly (at least annually) by the supervising staff.

346. Case record analysis can be limited to stated times (quarterly, semiannually, or annually). This reduces handling and permits more thorough analysis. Such a review would require for each individual service:

1. A plan;

2. The existence of standard criteria of service (nursing, clinic, medical social, rehabilitation, etc.) and

3. A comparison of performance as revealed in the record against the plan and the criteria of service.

347. This would permit an evaluation of the adequacy of health department service. An accumulation of unmet needs would provide a revealing statement of where emphasis should go and would indicate needs for and distribution of personnel.

> For example, if an analysis is made once a year of all known tuberculosis cases to determine how many are in the hospital, how many at home, the sputum status of those at home, and the number of tuberculous individuals at home who were last examined more than a year ago, attention is being focused on a specific problem and the health department's success—or lack of it—in keeping individuals under supervision. If, in addition, records of all new tuberculosis cases are examined to determine the stage and age of the case, attention will be drawn to the success of case finding.

348. A summary of this type of data provides appropriating bodies with a better understanding of the health department program and its needs than does the traditional count of visits, inspections, admissions to broad categories of service, etc.

349. Periodic case record analysis would be less expensive and more valuable than the accumulation of a vast quantity of uninterpreted data, which is still a wide practice among public health agencies.

350. While compilation of service statistics by periodic case record analysis has been initiated in several places, it has not been extensively developed in any of the systems studied. Even when such types of data are collected, the resulting tabulations are too frequently unused and are not coordinated with operation of the program.

351. Principle X. In order that only pertinent data be collected and that there be no duplication of either effort or data, each State health department should have a committee for the development, review, and control of basic records, forms, and procedures.

352. This committee should include at least the director of local health services and a representative of the statistical unit.

Areas for Further Study

353. In further carrying out the plan originally proposed, the working group recommends that attention be given the following areas:

1. Methodology of service statistics—techniques for the collection, tabulation, analysis, and interpretation of information with particular emphasis upon:

(*a*) Selection of units for measuring services of various types.

(*b*) The conditions and extent to which sampling can be used. There was difference of opinion regarding the advisability of substituting sampling procedures for an overall reporting system. One member believed that most of the information actually needed could be better and less expensively obtained by sampling than by routine reporting. Two others thought that sampling might be applied to special problems indicated from the overall report, but should not—in many instances—become a substitute for the total report. A fourth concluded that very likely some of the information now collected by complete recording could be adequately obtained through sampling procedures. It was pointed out, however, that in considering the alternative, the relative availability and cost of professionally trained personnel who can conduct valid sampling studies should be weighed against the clerical cost and time involved in total counts. Even allowing for this caution, it seems fair to assume that sufficient use has not been made of sampling in the area of health service statistics.

(*c*) Frequency with which service statistics should be compiled. The frequency with which service statistics are compiled as well as their content is an important factor in health department operation. Several of the departments under study had found that reduction in the frequency of required statistical reports (from a daily to weekly basis in some instances,

and from monthly to quarterly, in others) had reduced the burden of paper work without in any way damaging program operations.

(*d*) Exploration of possibilities for reducing the time spent by professional and semiprofessional personnel in preparation and maintenance of records, and in tabulation of information.

2. Coordination of service statistics needed by various types of official and voluntary health agencies.

Area for Immediate Study

354. Statistical units, in cooperation with epidemiologists, should make every effort to obtain information as to the proportion of preschool and school populations who have been immunized. Such data appear to be of great importance to the civil defense effort.

Summary

355. The number of health departments currently scrutinizing and revising their systems of compiling service statistics bear testimony to the need for a change from the "time-honored" tabulation of activities. These recently revised systems reflect a trend in defining minimum information needed by local health departments. Data describing services to individuals related to their needs for service are regarded as being most essential. These service statistics, in turn, must be related to basic demographic, economic, and facilities data in order effectively to plan, operate, and evaluate a health program.

356. While this concept has not been fully applied, even in the departments which have embraced it in principle, a more promising pattern seems to be emerging—and in geographically scattered areas. However, it must be recognized that in all health departments, experience with what seems to be a sounder approach is still limited. Only time and use will provide a true evaluation. The Working Group urges more health departments to undertake studies such as those reviewed in order to provide a broader base for continued evaluation.

Index

G

H

I

K

L

M

N

Public Health Monographs

No. 1. A methodology for environmental and occupational cancer surveys. W. C. Hueper. (Public Health Service Publication No. 12) 1950. 37 pages. 15 cents.

No. 2. Tuberculosis in Iceland. Epidemiological studies. Sigurdur Sigurdsson. (Public Health Service Publication No. 21) 1950. 86 pages. Illustrations. 45 cents.

No. 3. Head nurse activities in a general hospital, 1950. Apollonia Frances Olson and Helen G. Tibbitts. (Public Health Service Publication No. 107) 1951. 19 pages. 15 cents.

No. 4. Estimates of disabling illness prevalence in the United States. Theodore D. Woolsey. (Public Health Service Publication No. 181.) First printing, 1952; second printing, 1953. 16 pages. Illustrations. 15 cents. [Published concurrently with *Public Health Reports* 67: (8); see pages 807–810 for summary article.]

No. 5. Domestic rats, rat ectoparasites, and typhus control. Harvey B. Morlan, Bernice C. Utterback, Jack E. Dent, Maxwell J. Wilcomb, Jr., Melvin E. Griffith, and Leslie L. Ellis. (Public Health Service Publication No. 209) 1952. Illustrations. 38 pages. 25 cents. [Published concurrently with *Public Health Reports* 67: (11); see pages 1139–1140 for summary.]

No. 6. Plague in Colorado and Texas. Dean H. Ecke, Clifford W. Johnson, Virgil I. Miles, Maxwell J. Wilcomb, Jr., and J. V. Irons. (Public Health Service Publication No. 210) 1952. 54 pages. Illustrations. 30 cents. [Published concurrently with *Public Health Reports* 67: (11); see pages 1141–1142 for summary.]

No. 7. Identification of maladjusted school children. A comparison of three methods of screening. Charles A. Ullmann. (Public Health Service Publication No. 211) 1952. 42 pages. 25 cents. [Published concurrently with *Public Health Reports* 67: (12); see pages 1219–1223 for summary article.]

No. 8. Pretesting and evaluating public health education. Andie L. Knutson, Benjamin Shimberg, Jane S. Harris, and Mayhew Derryberry. (Public Health Service Publication No. 212) 1952. 26 pages. 20 cents. [Published concurrently with *Public Health Reports* 68: (1); see pages 54–55 for summary article.]

No. 9. Survey of antimalarial agents: Chemotherapy of *Plasmodium gallinaceum* infections; toxicity; correlation of structure and action. G. Robert Coatney, W. Clark Cooper, Nathan B. Eddy, and Joseph Greenberg. (Public Health Service Publication No. 193) 1953. 323 pages. [Published concurrently with *Public Health Reports* 68: (1); see pages 56–57 for summary.]

No. 10. Excess deaths from chronic disease during influenza epidemics. Selwyn D. Collins and Josephine Lehmann. (Public Health Service Publication No. 213) 1953. 22 pages. Illustrations. 20 cents. [Published concurrently with *Public Health Reports* 68: (2); see page 173 for summary.]

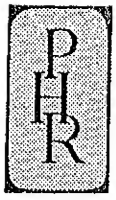
No. 11. The resistance of construction materials to penetration by rats. C. M. Tarzwell, R. L. Stenburg, H. P. Nicholson, and W. D. Lynn. (Public Health Service Publication No. 277) 1953. 16 pages. Illustrations. 20 cents. [Published concurrently with *Public Health Reports* 68: (8); see page 824 for summary.]

No. 12. Evaluation of cancer diagnostic tests (10 papers). Nils Eriksen, Lester D. Ellerbrook, Stuart W. Lippincott, Andrew C. Peacock, Joseph K. Cline, Jane Howle, Jane Reid, Leslie Johnson, S. C. Kasdon, F. Homburger, Jack H. Hill, J. Warren Kyle, Sara G. Richmond, Douglas H. Sprunt, William H. Fishman, and C. D. Bonner. (Public Health Service Publication No. 275) 1953. 52 pages. Illustrations. 30 cents. [Published concurrently with *Public Health Reports* 68: (9); see pages 880–884 for summary article.]

No. 13. Staffing of State and local health departments—1951. Jack C. Haldeman, Bess A. Cheney, and Evelyn Flook. (Public Health Service Publication No. 279) 1953. 56 pages. Illustrations. 30 cents. [Published concurently with *Public Health Reports* 68: (9); see pages 909–910 for summary.]

No. 14. Accident frequency, place of occurrence, and relation to chronic disease. Selwyn D. Collins, F. Ruth Phillips, and Dorothy S. Oliver. (Public Health Service Publication No. 249) 1953. 68 pages. Illustrations. — cents. [Published concurrently with *Public Health Reports* 68: (10); see pages 991–993 for summary article.]

No. 15. Records and reports of local health departments. Olive G. Johnson. (Public Health Service Publication No. 285) 1953. 92 pages. Illustrations. 45 cents. [Published concurrently with *Public Health Reports* 68: (11); see summary article.]



Public Health Monographs are edited and issued by *Public Health Reports*, the monthly journal of public health practice and research issued by the Public Health Service.

Readers of Public Health Monographs will find much of interest in each issue of *Public Health Reports*. If you would like your own personal subscription, send $4.25 (75 cents additional for foreign mailing) direct to the Superintendent of Documents, Government Printing Office, Washington 25, D. C. Enclose check, post office money order, or Government Printing Office coupons. Do not send currency or stamps.

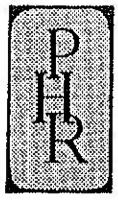
On direct request to the Public Health Service, a sample copy of *Public Health Reports* will be sent you.

ORDER BLANK FOR PHR

To: Superintendent of Documents
Government Printing Office
Washington 25, D. C.

Please enter my subscription for Public Health Reports. I am enclosing Money Order ☐ Check ☐ for this subscription. ($4.25 a year; 75 cents additional for foreign mailing.)

Please address the PHR as follow_____



_____

_____

PUBLIC HEALTH MONOGRAPHS

are edited and issued by *Public Health Reports* under the general direction of the Board of Editors. The monographs present contributions to knowledge in the fields of public health, particularly material that is extensive, detailed, or specialized. All manuscripts considered for publication as monographs receive the same technical and scientific review as papers submitted to *Public Health Reports*. The opinions expressed are those of the authors and do not necessarily reflect the views of *Public Health Reports* or the Public Health Service. Trade names are used for identification only and do not represent an endorsement by the Public Health Service.

Public Health Monographs are listed in the table of contents of the issue of *Public Health Reports* with which they are concurrently published. They are also listed in its annual index, in the *Quarterly Cumulative Index Medicus* (American Medical Association), the *Current List of Medical Literature* (Armed Forces Medical Library), and the *Industrial Arts Index.*

The monographs replace in whole or in part a number of publications series previously issued by the Public Health Service, including Public Health Bulletins, Bulletins of the National Institutes of Health, Venereal Disease Bulletins, and Supplements to the *Journal of Venereal Disease Information* and to the former weekly *Public Health Reports.*

Single copies of most Public Health Monographs are available upon request to the Public Inquiries Branch, U. S. Public Health Service, Washington 25, D. C. Orders for quantities should be sent to the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C., where they are available at the prices shown, with a 25-percent reduction on orders for 100 or more. In ordering, give full citation, enclosing cash, check, or money order. Stamps are not acceptable.